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Issues in Housing & Community Development

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carolina planning

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Cover photo depicts a "sweat equity" crew courtesy of the Enterprise Foundation.

editor's note

The 1980s ushered in a whole new set of problems for planners and analysts concerned with housing and community development. Housing assistance from the Federal Government virtually disappeared, and many previously popular community development programs lost both Congressional and popular support. Also, the incipient population shift that began in the 1970s blossomed in the 1980s — cities in the Sunbelt grew rapidly, resulting in substantial demand for housing and new infrastructure.

This issue of *carolina planning* examines some of the innovative organizational and technical responses that have emerged in the face of a bleak federal subsidy forecast and significant demographic shifts. Suggestions for new methods and strategies for attending to both types of housing problems are also offered.

Three articles in this edition focus on housing and community development in high growth areas. Thomas P. Snyder approaches the issue of infrastructure financing from a legal perspective. He describes the legal underpinnings of special assessments, exactions, and development fees as well as the legal limitations encountered by municipalities when trying to implement them. An interview with Norman Block explains the economics of housing in high growth areas such as Chapel Hill and, in light of this analysis, discusses why public intervention is necessary for making affordable housing available. With regard to the entry of new industrial developments into growth areas, Harvey Goldstein offers criteria and methods for evaluating the impacts of an industrial development on a community.

Although older metropolitan areas are suffering from federal cuts, some hopeful signs are visible. Included in this issue is a profile on the Enterprise Foundation, a non-profit, low-income housing assistance organization founded by James Rouse. The Enterprise network encompasses 17 cities. Tracy Hood illustrates the many benefits derived from community gardens, a community development technique long forgotten by many planners, but worthy of resurrection. Toward the end of revitalizing older inner-ring suburbs with large service-dependent populations, Patrick Hare envisions suburban communities in which largely underutilized traditional homes become effective economic units and social service facilities. He cites a host of examples in suburbs where this is occurring. Our final feature is a commentary piece on the future direction of national housing policy, written by Michael A. Stegman. Stegman calls for the development of a new policy paradigm to guide policy-making, as neither the traditional market nor the non-market models are leading to an acceptable housing program.

Before ending, I'd like to extend a special thank you to Michael Stegman for his guidance and support of this housing and community development issue and also to the very dedicated *carolina planning* staff members.

Stacey A. Ponticello
Editor

carolina planning welcomes comments and suggestions on the articles published and will be happy to accept new material for future editions from interested persons. Such material should be submitted to the Editor type-written, double spaced, and not to exceed fifteen pages length.

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In the Works

Bulletin: 1985 Joint Professional Development Conference

Russell Berusch

The 1985 Joint North Carolina/Virginia Chapter American Planning Association Professional Development Conference was held October 3-5 at the Hotel Roanoke in Roanoke, Virginia. The conference was workshop-oriented and focused on site plan review, performance zoning, streamlining development review and development dispute negotiations.

Mr. Cofer of John I. Cofer and Associates from Richmond began the discussion by emphasizing the importance of a quality site plan review. He pointed out that the Virginia legislation currently offers little direction on reviewing a site plan, and that a site plan that is reviewed strictly at the staff level would help minimize ambiguity and improve relations between the public agency and the developer. A site plan review ordinance or accompanying guide should be adequately detailed so as to tell the designer what to address. In this way, points of mutual conflict can be avoided. To this end, a site plan review ordinance should include four statements: 1) the type of uses desired; 2) the scope and purpose of the review, including specific requirements of design, landscape preservation, parking and circulation; 3) the person who makes the final decisions; and 4) the procedures for review and site plan revisions.

Mr. Cofer also articulated some of the problems associated with site plan review procedures. Although a detailed plan is desirable, many reviews are over-concerned with unimportant specifics. Haggling over the "shape of a manhole cover" or the difference between "a Pine tree or a Magnolia," he noted, is counterproductive. Lengthy delays between plan submittal and response or conflicts between requirements also serve to retard and frustrate the development process.

Terry Harrington, Land Development Coordinator of Blacksburg, Virginia, brought the perspective of a staff member in a small agency to the conference. Mr. Harrington outlined three process principles of site plan review. First, zoning codes should provide standards for the review. The zoning administrator should be given the authority to waive, within limits, trivial or irrelevant requirements. Secondly, the agency must work consistently and frequently with the developer throughout the process in order to achieve both the community's and the developer's objectives. Finally, the development process must be made as time and cost efficient as possible for both the developer and the agency's staff. To link these principles, Mr. Harrington suggested the use of a checklist that should be distributed to all parties participating in the development process. Importance should also be placed on making on-site visits both before the site plan review and during construction.

Rex Todd, Director of Community Development of Garner, North Carolina and John Horne, Director of Planning of Albermarle County, Virginia led this conference's section on performance zoning. Mr. Todd proposed that individually tailored performance standards of two types, environmental and industrial, may be more effective than traditional specification standards in positively influencing the community's development. Industrial performance standards are concerned with the performance of man's use of the land. Environmental performance standards attempt to preserve or maintain a performance of the land already there. A number of steps lay at the heart of adopting performance zoning techniques. Some of these include:

- the identification and location on a series of map overlays of those natural and man-made systems which are present in the planning area.
- the identification and listing of the functions being performed by each system.
- a priority ranking of systems which serves to exclude from further study those sytems or functions of systems deemed not important enough to the community, so that a community can focus its planning efforts on those issues identified as critical, saving issues of lesser priority for later study.

Russell Berusch is a Master's Candidate in the Department of City and Regional Planning at the University of North Carolina at Chapel Hill.

- Systems analysis is the most technical step of the process and consequently will require considerable literature research and assistance from experts knowledgeable of the various systems. The analysis must be directed toward answering the following questions relative to the measurement of the system's performance: what is the system's present level of use; what is the system's ultimate carrying capacity; and what is the remaining capacity of the system?
- Performance standards should be developed to set the goals and guidelines for each system and sub-system's functions. Once all performance standards are developed they should be incorporated into an ordinance format. The jurisdiction may wish to address directly the issue of whether zones are to be used, what type of zones, and what other requirements or restrictions inside each zone, besides performance standards, are desirable.
- The application of performance standards of the industrial and environmental type are not necessarily a replacement for existing zoning controls, but may be administered as supplementary regulations to the basic controls. At the very least, performance standards provide a platform from which to rethink and embellish upon traditional zoning practices.

Mr. John Horne talked about the use of residential performance standards by individual communities to encourage quality housing development. Some of the ideas behind residential performance standards are to eliminate the need for rezoning and the provision of flexibility in development and housing design. Essentially, residential performance standards make sure that developments satisfy the general performance requirements before construction approval is granted. In satisfying these requirements four basic characteristics should be encouraged: efficient land use patterns; reduced housing and public facility costs; energy efficient housing and housing patterns; and environmentally sensitive land use.

Mr. Horne also outlined the ideas behind the granting of density bonuses. If a developer surpasses certain requirements regarding environmental, open-space, recreation and energy conservation guidelines, he may be awarded a bonus of a fifteen percent increase in gross density. For example, a developer may be awarded a density bonus for erecting a play ground or a bike path.

The final session of the conference on resolving development disputes through mediation and negotiation was workshop oriented and was led by David Godschalk, a professor at the University of North Carolina at Chapel Hill, and by Bruce Dotson, Assistant Director of the Institute for Environmental Negotiation. Participants learned how to use the ideas discussed about development review as a forum for resolving the conflicts between the city and the developer in day-to-day interaction.

Strategies for Low Level Radioactive Waste Management

Frank M. Moore

Frank M. Moore received his law degree from the University of Georgia in 1984 and is currently working with the Conservation Foundation of North Carolina on the Hazardous Waste Public Participation Project.

Low-level radioactive waste is produced by several different categories of generators and consists of a broad range of materials. Nuclear power plants, industry, medical facilities, academic and government research institutions all contribute to the waste stream. In North Carolina there are some thirty low-level radioactive waste (LLRW) generators, including the nuclear reactor facilities of Carolina Power & Light at Southport, Duke Power at Cornelius, and General Electric at Wilmington, N.C. Research facilities at Duke, East Carolina, UNC-Chapel Hill, and Wake Forest also produce LLRW, or radwaste. Compared to other nuclear waste material, LLRW contains relatively small amounts of radioactivity, yet it constitutes the largest physical mass of nuclear waste generated.

Currently, commerical LLRW is shipped from the generating facility to one of the three remaining burial sites at Barnwell, South Carolina; Beatty, Nevada; and Hanford, Washington. Three other sites, Maxey Flats, Kentucky; West Valley, New York; and Sheffield, Illinois have been closed due to water infiltration and radionuclide migration. These sites are now monitored and maintained at

high costs to the host states. The nuclear power industry is the largest producer of radwaste, and opponents of the current waste management system argue that the industry should be held to a higher standard of responsibility.

The management of low-level radwaste has always been problematic. Burial technology has been proven ineffective in containing radioactivity. Traditional safeguards involved lining the trench and covering the stacked contents with clay, forming a domed top. The conventional wisdom was that the clay would prevent water intrusion, and the base would retard leaching sufficiently to prevent the escape of any radioactive material. But leakage has occurred, with results particularly poor in areas of high rainfall and delicate soil structures. Even when lined and covered with plastic, satisfactory isolation has not been achieved.

Federal regulations vicariously define low-level radioactive waste as any radioactive waste not defined to be high-level waste. This creates a broad category, and includes some very radioactive material, both in terms of radiation penetration and half-lives. These materials can be diluted to acceptable levels by the generators prior to shipment, but over time their concentration builds up at the burial site, making the amount of radiation far beyond that anticipated for radioactive waste disposal. It is much more appropriate to categorize waste according to its physical, chemical and nuclear properties so that effective nuclear technology and management procedures can be applied, including waste segregation, volume reduction, and above-ground storage.

A lack of adequate disposal space for radwaste is another growing problem. The capacity of the three operable burial facilities will soon be exhausted. South Carolina has refused to expand the capacity of its Barnwell site and has scheduled its closure by December 1, 1992. This becomes particularly critical as the nuclear power industry matures and older facilities reach their useful lives and are decommissioned, introducing massive amounts of contaminated material into the waste stream.

To address some of these problems, Congress passed the Low-level Radioactive Waste Policy Act of 1980. The legislation is based on the concept that each state should be responsible for the management of its own waste, and that LLRW can be most safely and efficiently managed on a regional basis. The act authorizes the states to form interstate compacts, with each compact acting as a waste management

Photo courtesy of *tread softly* quarterly. Vol. 1, No. 4

region that is able to exclude all waste not produced within its boundaries and to determine which member states will provide needed facilities. Instead of the remaining three waste burial sites, there could be as many as nine, and no one state would be required to carry the burden of hosting a facility for a large part of the country. The Low-Level Radioactive Waste Policy Act of 1980 may help to solve the problems of inequities and future waste facility capacity, but it fails to address the issues of effective waste isolation and industry accountability.

Several environmental groups, including the Conservation Council of North Carolina, the Conservation Foundation of North Carolina, and the Sierra Club, advocate the implementation of alternative management strategies. It is particularly appropriate that this issue receives increased attention as the regional compact commissions begin to determine the fate of their member states. The power to consider and implement new solutions to the problems of LLRW management is within the authority of the compact commissions. Unfortunately, due to the economic costs of change, industry pressures exist to preserve the traditional strategy of centralized facilities and waste integration.

A commercial incineration facility has been proposed for location in Bladen County, North Carolina. If licensed, it would be operated by U.S. Ecology, Inc., a firm whose nuclear experience includes the unsuccessful management of the dump sites at Maxey Flats and Sheffield, and the present management of the Hanford, Washington facility. According to its license application, the facility would have the capacity to receive and process all the projected waste volume for the entire Southeast for the life of the facility, giving it a potential

monopoly on low-level waste management in the region. There are also concerns about radioactive and hazardous emissions from the incinerator's stack that have not been fully addressed. The residents of surrounding counties and municipalities have organized United Concerned Citizens for Ecology, Inc. and the Coalition Against Radioactive Incineration to challenge the facility.

Opponents of the incinerator have petitioned North Carolina's Department of Human Resources to issue a declaratory ruling on the question of whether U.S. Ecology Inc. would be required to apply for a permit to handle hazardous waste, under the authority of the Resource Conservation and Recovery Act (RCRA), as well as a license to handle radioactive waste. A precedent has already been established by the 1984 case of *LEAF v. Hodel*, where the U.S. Department of Energy (DOE) was held subject to the permit requirements of RCRA. DOE has since proposed regulations affecting all DOE facilities handling mixed wastes, and the Environmental Protection Agency, the agency authorized to implement RCRA, is expected to propose its own rules soon. The question left unanswered, however, is the applicability of RCRA to commercial LLRW facilities, such as the proposed Bladen County incinerator, and it appears likely that North Carolina will play a major role in determining the outcome of this issue.

An appropriate LLRW management strategy could be based on two simple concepts: pollution prevention by effective isolation and industry accountability. Effective isolation can be defined as waste containment for the duration of its hazardous life. Material with a short hazardous life can be stored in temporary containment facilities before being disposed of as ordinary waste. Waste with longer half-lives should be isolated for perhaps hundreds of years in easily monitored, above-ground facilities. Such technology is already established at the Sequoyah facility in northeast Alabama. The problem of waste volume could be solved through the use of shredder-compactors. The overall scheme would keep as much radioactivity as possible on the site of production and place the responsibility of management on the generating facility. Effective monitoring techniques would be established at the facility, and an overall waste management plan would be developed specific to each facility's need according to the type and amount of waste produced.

Since North Carolina may be host to a new LLRW management facility in Bladen County, it should be seeking to bring into the region more effective technologies and more responsible strategies for the management of low-level radioactive waste.

This article is an extension of a White Paper on Low Level Radioactive Waste Management at the Conservation Council of North Carolina. Copies are available at cost. The opinions in the article are solely those of the author.

Planning Curriculum: Meeting the Challenge

Dale Whittington
John Cook
Michael A. Stegman
Emil Malizia

The Department of City and Regional Planning of the University of North Carolina at Chapel Hill has recently introduced two new teaching initiatives in Real Estate Development and Planning for Developing Countries. The following are brief descriptions of the purpose and design of the new curricula.

Planning in Developing Areas

In the fall semester, 1985, the Department of City and Regional Planning at the University of North Carolina at Chapel Hill established a new Masters level specialization in Planning in Developing Areas. The new curriculum is designed for both students from developing countries and North American students interested in pursuing careers in international planning and policy analysis.

The Department of City and Regional Planning has a long history of training students for planning work in developing countries, both at the Masters and PhD. level. Over fifty alumni of the Department are currently employed in international positions with organizations such as the World Bank, the United States Agency for International Development, consulting firms specializing in developing areas, and foreign governments. Foreign graduates of the Department have often returned to their home

countries to assume positions of major responsibility and prominence in the planning field.

The curriculum of the new international planning program includes five courses designed to introduce students to the special problems of planning in Third World countries, and to train students in development planning methods. Special emphasis is placed on developing skills in population planning, project evaluation and public investment theory, environmental and resource management in Third World countries, and microcomputer applications in development planning.

Some of the most difficult planning problems facing developing countries are related to improving the material living standards of their populations. For example, expertise in land use, housing, urban development, and water resources planning is urgently needed. Moreover, many developing countries face population growth rates and internal movement of population that result in hyperurbanization. Planners tackling such problems will certainly benefit from an understanding of the methods and experience of the planning profession in developed countries. Therefore, in addition to the Department's core requirements, students in the new masters program are encouraged to complete a second area of specialization in a field such as economic development or infrastructure planning in order to complement their studies in international planning.

Well-trained planners for Third World countries are in many ways better able to address the particular planning problems of their countries than are expatriot planners. An understanding of the peculiar dynamics operating within the society and economy of a given country, and of the needs and constraints which it faces serves as an advantage to one who has lived in that country and shares its culture. The new program in international planning will place special emphasis on training students from developing countries to fill the urgent need for well-qualified native planners.

It is also expected that many North American planning students will take advantage of the unique opportunities at the Department to study the problem of planning in developing countries. New opportunities are opening up for individuals skilled in microcomputer applications, urban financial management, infrastructure finance and planning, and population planning. The Department's new program will target such growth areas.

The new program will also serve as a focus for students of different disciplines on the UNC-CH campus who are interested in development issues. A wide range of courses on international topics are currently offered on the UNC-CH campus in departments such as sociology, geography, anthropology, economics, political science, the School of Public Health and the Institute of Latin American Studies. The Department's program in Planning in Developing Areas will serve as a focused central curriculum for these students.

In addition to course offerings at UNC-CH, the resources of the Triangle area offer students in the new masters program a unique set of research and employment opportunities in the field of international planning. Students from developing countries in particular may benefit from first-hand observation of the Research Triangle Park, one of the world's most successful planned research and education complexes.

Planning and Real Estate Development

For many years real estate has been taught as a separate discipline as well as a specialization within undergraduate and graduate programs in schools of business, law and design. With few notable exceptions, these programs have tended to focus on the legal, financial and other technical dimensions of real estate rather than on the development process. Recently, the Department of City and Regional Planning at the University of North Carolina at Chapel Hill has created an area of specialization in real estate development as part of its planning curriculum.

Although it is integrated into the Master of Regional Planning and Masters of Business Administration programs, the real estate specialization at the University of North Carolina has its own identity and is neither subordinate to land use planning nor considered to be a subarea of finance. It is truly a joint program. Of the eight key courses in the specialization, four are taught in the planning department, two in the business school, and two are cross-listed in both programs.

The four-course required sequence in real estate accounts for about a quarter of the student's total two year program. After these requirements have been met, students still have ample opportunity to obtain additional preparation in finance and investment analysis, site planning and design, land use planning, local public finance, housing, law, marketing or economic development.

Bolin Forest in Chapel Hill, NC

All students in the specialization receive in-depth, graduate-level training in topics essential to successful real estate practice. First year planning students learn the history of U.S. planning, the form and growth dynamics of cities and regions, economic analysis concerned with efficiency/equity tradeoffs and market interventions, microcomputer-based training in information management, multivariate statistics, discounting and decision analysis, and the methods of land use, economic development, or infrastructure planning. Real Estate Investment and Affordable Housing, offered in the Spring semester, relies heavily on the case method and applies discounted cash flow, rate of return analysis and other investment analysis techniques to public-private development programs, regulatory and national housing policy issues.

First year business students begin their training with courses in financial, operational, marketing and human resource management, general theory and techniques in integrative management, accounting, quantitative methods, and economics.

In the Fall semester of their second year, both planning and business students take courses in Real Property Decisions and Housing and Public Policy which provide overviews of the real estate field. Real Property Decisions emphasizes the developer's perspective on urban economics, valuation and taxation. The second part of the course focuses on deal structuring, syndication, and portfolio management. Housing and Public Policy emphasizes the public interest issues in real estate development; the structure and dynamics of local housing and real estate markets; local efforts to manage growth and to equitably allocate the public costs of growth between current and future generations; and, the mutual benefits of public-private cooperation.

Students round out their Fall programs by taking Development Dispute Resolution which focuses on the use of negotiation, bargaining and mediation techniques for resolving or avoiding development dispute; Real Estate Lending, which focuses on secondary mortgage markets or marketing research; or Project and Site Design, which trains non-designers in the fundamentals of site analysis, design and physical planning.

In the Spring semester, planning and business students take two capstone courses—the Development Process and Real Estate, Market and Feasibility. The former deals with the coordination, project timing and phasing, and risk mitigation of the development process. The latter is a synthesis course requiring fieldwork for the application of relevant theory and techniques to a real world project. Joint teams of planning and business students conduct the full range of market, financial, public policy, legal/regulatory, design, and construction studies to prove the feasibility of real estate projects they believe should be developed. The projects span the full range from an office park to the rehabilitation of a historic mill for use as a retail center.

Students also have the opportunity to pursue course work directly relevant to their career interests. For example, planning, students can take courses in public finance and investment, land use planning, economic and community development, historic preservation or urban revitalization. Business students can specialize in finance, marketing or property management.

The Department of City and Regional Planning of the University of North Carolina at Chapel Hill strives to extend the intellectual boundaries of the traditional real estate curriculum by bringing it within the framework of a public interest-oriented city planning program. □

Forum

The American Dream — An Impossible Dream?

Stacey Ponticello Russell Berusch

Norman Block is Chapel Hill, North Carolina's largest realtor and is also an active participant in community affairs. One of his current local, public concerns is the provision of affordable housing in Chapel Hill. In the interview below, Mr. Block explains the economics of housing in Chapel Hill, comments on several suggested solutions to the housing problem, and finally offers a strategy for providing affordable housing.

Mr. Block received a Master's Degree in Business Administration and a Juris Doctorate Degree from the University of North Carolina at Chapel Hill in 1978.

CP: *Affordable housing is an important issue in Chapel Hill, N.C., and one that concerns many people across the country. Many young, middle class Americans consider the idea of buying their own home a remote possibility.*

Our first objective for this interview is general in nature. As an active player in the Chapel Hill real estate market and knowledgeable observer of the nation-wide industry, we would like your opinion on the real estate industry's current and anticipated response to the demand for affordable housing. Secondly, we'd like to focus on the issue of affordable housing within the context of Chapel Hill, thinking of it as a prototype of rapidly growing areas across the country. To this end, we would like your opinion on what the public and private actors can do (either independently or jointly) to provide affordable housing.

CP: What do you feel are the dominant economic forces that have driven up the cost of a home in the last decade? And, have any of these changed in favor of the construction of affordable housing?

BLOCK: There are two things at work that have raised the cost of housing. The first has to do with the physical housing product itself — construction costs. That can be divided between labor cost and material cost. Both costs have gone up significantly. Part of it has to do with the petroleum situation which goes all the way back to the oil crisis. I don't think people realize how many things are oil-related (plastics, fuel for earth-moving equipment and other heavy machinery). We saw some increases based on that. Material costs like lumber went up tremendously also. Almost all components of a house have gotten more expensive. When I started in real estate, a basic house with three bedrooms, hardwood floors, and a couple of skylights — not super elegant — was $28.00 a square foot. That same house today, not super elegant, is $50.00 a square foot.

What people don't realize is that the cost of money has gotten much more expensive. For the homeowner, mortgage costs have grown substantially. Let me give you an example. Let's compare the cost of a 1400 square foot house in 1977 and 1985. In 1977, this home would cost $28.00 a square foot. In 1985, the same house costs $50.00 a square foot. That brings the two totals up to $40,000 and $70,000 respectively. The cost of a lot also rose during this period, from $10,000 in 1977 to approximately $18,000 in 1985. With the cost of land added to construction costs, the sale price of this same house becomes $50,000 in 1977 versus $70,000 in 1985. During this eight year-period, mortgage rates rose from 8% to 12.5% for an 80% loan to value ratio. Monthly payments on a basic house in 1977 came to $293.51 per month and $751.87 in 1985. That's a 156% increase in total monthly payments.

The stick-built multifamily option

CP: Would building smaller houses be a solution to the current high cost of housing?

BLOCK: There's a trap in making houses smaller. When building a house, there are variable and fixed costs. Variable costs change with size, but fixed costs do not. Let's take that 1400 sq. ft. house and shrink it down to 1,000 sq. ft. You have the same amount of fixed costs, and these make up the bulk of the costs. You still have the cost of clearing the land, building the same number of walls, and installing a bathroom and kitchen. So, making houses smaller is not a way to make them substantially less expensive. At best, you can reduce the cost marginally.

CP: Do you expect manufactured housing to become a more popular option for middle-income families?

BLOCK: I can take you to any subdivision in Chapel Hill and show you any 1400 square foot house for $50,000, and then take you out to the interstate, to the mobile home lot and show you a double-wide home, 1400 square feet, with the same Armstrong solarium tile floor and all that, and that's going to be in the high 20's. But the mobile home is not acceptable to a lot of people.

Right now, there is a large gap between mobile homes and traditional ones. Part of the problem is that the aesthetics of the manufactured homes have to be acceptable to the neighbors and the community, and the town won't allow them to be zoned like other homes. Although manufactured housing has become more sophisticated, I don't see the gap between the two closing any time soon. In the current marketplace, I see that people who are interested in detached single family houses – but who cannot afford them – are opting for stick-built multifamily housing rather than mobile homes.

CP: Have there been any innovations in building technology or design that might make construction less expensive?

BLOCK: We have experimented with the idea of using manufactured building components to bring down the cost of traditional houses. We tried using manufactured walls and panels, but we found that it had little effect on price.

CP: Would changing density ordinances encourage the development of lower-cost housing in high growth areas like Chapel Hill? For example, would raising the permissible density level result in the construction of affordable housing?

BLOCK: Chapel Hill currently has a higher density ordinance than it did several years ago. What this has done is change the spatial arrangement of Chapel Hill's residential areas. I don't know that it has lowered the cost per unit of housing, but it has increased the number of multifamily houses.

CP: We'd like to switch gears a little bit and focus solely on Chapel Hill issues. How do you perceive the current status of the affordable housing issue in Chapel Hill?

BLOCK: My comment to that is that there is more conversation than action about affordable housing. I don't want this town to become an exclusive community. That would eliminate the charm and specialness of the community, things like the flower ladies and the little parts of Chapel Hill.

Also, I feel embarassed when I think that the teachers who instruct my children, the public safety forces who protect our city, and even the secretaries in my office can't afford to live here. Some commute from as far as 30 miles away. I'd like to do something about it, but I can't stop running my business.

Here's why there's so little action – there really are no financial incentives to build affordable housing. Given the demand in Chapel Hill, any builder

in Chapel Hill can make all the money he wants to make, and have all the business he wants to have by building homes at $100,000 and up. Naturally, the more expensive the house, the bigger the profit margin. Why should anyone take the financial risk of accepting a small margin when it costs the same in time and energy to supervise the construction of more expensive housing. I don't see anybody taking that challenge, at least anyone who is a good businessman. I hear a lot of conversation about affordable housing, but I'm not optimistic about anything getting done. And, the federal goverment is getting out of the housing business as you know.

CP: Can you describe a scenario for Chapel Hill in which public and private actors create a strategy for the development of affordable housing?

BLOCK: I think the city would have to step in with the land. They would have to make land available at a reasonable cost because one of the traps in Chapel Hill is that the land is very expensive. The city currently owns two tracts of land which it could designate for affordable housing. Then we have to get some highly motivated, good citizen-type businessmen. They won't work for nothing, but they might accept a lower profit margin.

The city would also have to lower its development standards to help bring costs down further. For example, in place of sidewalks, it would have to accept grass swales and grass shoulders as Carrboro does. Also, Orange Water and Sewer prices are *extremely* expensive. To make it work, you'd have to have the city identify and acquire land, lower its development standards, and assist with water and sewer hook-up charges. Even if it did work, the city would have the problem of selecting people who are eligible to buy that housing. The city, in conjunction with private developers, may be able to build 30 affordable houses, but there are probably more than 1,000 interested households.

Another possible source of land is the University. It owns a lot of land in Chapel Hill, and they have a vested interest in building affordable housing since junior faculty and staff members often have difficulty finding affordable housing.

CP: What about the Council members, they're advocating a building moratorium at the same time as they are acknowledging affordable housing as an important issue?

BLOCK: There's no question that the Council can control supply, but they can't control demand. Raleigh, Durham and Chapel Hill are growing together quickly. All the economic trends predict steady growth, and that means rising housing costs. When they open up I-40, demand is going to swell further. Also, if the Council declares a moratorium, as I predict they will, it too will impose an upward pressure on prices. I'm not saying they're wrong, but they need to understand the effect of a moratorium on prices. Given the level of demand in Chapel Hill, a moratorium will cause housing prices to go way up.

The Council must set priorities. If it decides to commit itself to the issue of affordable housing, then other municipal services will suffer, given budget constraints. This is a decision they will have to make soon. □

Norman Block

The Legal Issues of Serving New Development

Thomas P. Snyder

Special assessments, exactions, and development fees are quickly becoming popular among cities with development pressure. This article discusses the limitations the courts place on the use of such financing for infrastructure, thus giving guidance to local officials. Many of the limitations on private financing involve drawing fine legal distinctions in wide "gray" areas, or making decisions when the courts future direction is uncertain. If local officials are to make informed decisions in such situations, they must understand some of the legal reasoning that underlies private financing.

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Court decisions and other legal limitations have had a pivotal influence on the use of private financing for new infrastructure in the United States. Through the first half of this century, statutory and case law severely limited the types of infrastructure that could be financed privately. The courts generally viewed restrictions on private financing as necessary to protect individual rights. The provision of most infrastructure was seen as a responsibility of society; the responsibility of the individual for financing such infrastructure was through general taxes, which were established to finance the general activities of government. Private financing of any infrastructure that did not provide direct, localized benefits to those who had to pay for it was seen by the courts as circumventing the basic system of public finance. It was also seen as an effort by local governments to shift financial responsibility for government activities to specific individuals or groups in a way that was not justified under such basic principles of taxation as "ability-to-pay." For such reasons the courts regularly prohibited the use of special assessments and exactions to provide parks, schools, libraries, arterial roads, and central wastewater treatment and water supply facilities.

In recent years the courts have liberalized their approach to private financing of new infrastructure. Previous restrictions on the use of private financing had failed to recognize the effect of growth on tax rates and user charges when infrastructure was publicly financed and had not foreseen the political results of forcing current residents to bear much of the cost of new development in rapidly growing areas. To address those realities, the courts have allowed the use of private financing to fund a broader range of infrastructure. In liberalizing the use of private financing, the courts have shifted emphasis from the general principles of public finance that underlie the tax system to protecting public interests from the effects of private development decisions.

In making that shift the courts are initiating vital reforms in the use of private financing. There are, however, critical questions as to whether the courts have gone too far and whether they are ignoring important areas of intergenerational responsibility (cost-sharing between current and future residents) that have been established over the years.

First the legal issues associated with the use of special assessments will be discussed, followed by the legal issues involved in using exactions and development fees. Legal reasoning about special assessments is fairly well established and has changed little in recent years. Consequently, special assessments are limited in most instances to their traditional role of financing specific projects which provide local benefit, and in most states have been only marginally beneficial in dealing with the costs rapid development places on current residents. For that reason, the discussion of special assessments

focuses on the types of facilities that can be financed with them and on possible ways to expand that narrow universe. In contrast, the legal limitations on what can be financed with exactions and development fees have changed dramatically in recent years.

These changes have made exactions and development fees an effective tool in dealing with the fiscal impacts of new development in rapidly growing areas, but they also raise questions about their appropriateness in slow growing areas.

Criteria for the Use of Special Assessments

The legal foundations for special assessments were firmly established at the beginning of this century and have changed little since then. In fact, the language contained in many of the early twentieth-century court cases was so strong that it has been virtually impossible to use special assessments to solve some of the problems communities now face in financing new infrastructure.

Writing in 1898, when the U.S. Superme Court handed down a landmark decision that established modern principles of special assessments, Victor Rosewater described three legal phases in the evolution of special assessments.[1]

In the first phase, special assessments were viewed as exercise of police power. They were introduced as a way of eliminating public nuisances, and they could be used only after the property owner was given the opportunity to eliminate the nuisance on his own. The second phase in the evolution of special assessments, also an exercise in police power, involved the use of local governments' condemnation powers or powers of eminent domain to acquire the rights of way for new streets and roads. Special assessments were used to recover the public costs of land acquired under eminent domain power from those who benefitted. This second phase in the use of special assessment left the communities without a way of financing improvements to the newly acquired public rights-of-way. The need for local revenues to improve and pave new streets ushered in the third phase in which special assessments are justified as a use of *taxing* rather than police power. It is this third phase that characterizes the use of special assessments today.

Restrictions on the Use of Special Assessments

As an exercise of taxing powers, special assessments must be specifically authorized by the state either through enabling legislation or constitutional provision. Without such authorization, they,

like most other taxes, are routinely rejected by the courts as an illegal exercise of revenue collecting powers. Even in states such as California, where the courts have accorded broad revenue powers to localities under home rule, special assessments require specific authorization, because the courts have determined that the state has preempted local governments in regulating the use of such financing. Some of the difficulties that local governments are likely to encounter with existing enabling legislation include the following: grants of special assessment powers to particular levels of governments, (such as cities, counties or specific types of independent special districts); limits on the use of assessments to particular types of infrastructure, (such as roads, sewer extensions, and sidewalks); prescriptions on specific ways of allocating costs ot different types of property, (such as front footage or acreage charges); and restrictions on the government's ability to borrow against the revenues. In

authorization powers

most states, legislatures have been willing to change special assessment laws regularly to meet communities' needs.

Uniformity

tax distinctions

Although special assessments are viewed as an exercise of taxing power, they are distinguished from general taxes, which must be imposed at uniform rates. In most states, either constitutions or statutes require that local governments impose taxes uniformly throughout the jurisdiction. In states which allow property to be "classified" for property purposes, taxes must be uniform on all similarly classified property in the jurisdiction.[2] Uniformity requirements are an effort to guarantee that all people who are in essentially similar situations are taxed at the same rate throughout a jurisdiction. Furthermore, "reasonableness" required under the due process clauses of the federal and state constitutions is often measured by the degree of uniformity exercised by a municipality in imposing taxes. Special assessments clearly do not satisfy such uniformity requirements, since they are imposed in special assessment districts that do not encompass entire jurisdictions. To overcome such difficulties the courts established the concept of "special benefits"

defining special benefits

to distinguish infrastructure that could be legally financed with special assessments from infrastructure that had to be financed through uniformly imposed taxes. Special benefits were defined as benefits from public improvements that increase property values. In affirming the reasonableness of special benefits, the U.S. Supreme Court in 1898 in *Norwood v. Baker* ruled that:

> . . . the principle underlying special assessments to meet the cost of public improvements is that the property upon which they are imposed is peculiarly benefitted and, therefore, the owners do not, in fact, pay anything in excess of what they receive by reason of such improvement. . . .

Norwood and similar cases in the early part of this century established the basic criteria under which special assessments could be used.[3]

The definition of "special benefits" has proved more useful as a theoretical concept for justifying special assessments than it has as a criterion for determining where special assessments can be used. The problem with the formal legal definition of "special benefits" is that all infrastructure, regardless of size or scale, tends to increase the value of property, as has been indicated by recent research in public finance.[4] In trying to operationalize the concept of special benefits, the courts in the past half-century have come up with two criteria for determining when infrastructure provides "special benefits" and when it provides "general benefits." The first is to provide benefits to some properties at levels in excess of those provided by the city to all properties. The second is to define infrastructure as providing "special benefits" when the benefits of a specific facility are primarily local. Many courts have used this second criterion to prohibit the use of special assessments to finance infrastructure that provides benefits that accrue to all of society (such as educational benefits), as well as to prohibit special assessment financing based on the scale of a project. This criterion has been used effectively to justify the private financing of localized improvements that involve dramatically different costs in different parts of a city, due to such factors as the density of the development and types of land use in an area. Mandelker *et. al.* summarize the use of special assessments by noting:

> All such assessments have one common element: they are for the construction of local improvements that are appurtenant to specific land and bring a benefit substantially more intense than is yielded to the rest of the municipality. The benefit to the land must be actual, physical and material, and not merely speculative or conjectural.[5]

Since the above criteria involve making relative judgments, courts in various states have interpreted specific situations differently. The potential user of special assessments should refer to the precedent set in his particular state and to the more detailed discussions of specific cases found in most legal texts and case books on local government law.[6]

Allocating costs through assessments

In allowing the use of special assessments to finance infrastructure that provides special benefits, the courts have required that properties be assessed for costs in proportion to the benefits they receive, and that the revenues from the assessment not exceed the cost of the infrastructure being financed. The courts have allowed a great deal of discretion in the allocation for costs among benefitted parties, requiring only that the assessment formula approximate the proportion of benefits received. The relationship does not have to be exact. The courts have

consistently accepted general rules of thumb, such as front footage or acreage, for allocating costs and generally have left the determination of reasonableness up to legislative discretion.[7] When properties that do not directly abut an improvement or that receive only indirect benefits from an improvement are assessed a portion of the cost of the improvement, the assessments are often challenged in court on the grounds that the assessed properties receive no special benefit. But recent decisions have upheld such assessments. Typical are the arguments of a California court:

> . . . Land may be included within an irrigation district, even though such land cannot legally receive any surface delivery of water from the district, since the land will be benefitted by the increase in ground water due to delivery of water on neighboring lands and will also increase in value because of the general increase in value of land within the region due to availability of water.[8]

Similarly, a South Carolina court upheld an assessment on property that was more than a mile from a sewer line, because the assessment was based on indirect benefits:

> . . . Indirect benefits which may accrue within the subdistrict include enhanced property value resulting from decreased distance to sewer disposal lines, proximity to well developed centers and generally improved conditions of sanitation and public health throughout the area.[9]

In the South Carolina case the court also upheld the legality of subdistricts with differential assessment rates within the special assessment district. Furthermore, courts generally have not restricted assessments to one-time charges imposed at the time of construction, which is typical of most special assessments, but have upheld *ad valorem* assessments (based on either the value of all real property or the value of land), connection charges, and development fees.[10]

The primary trouble with limiting the use of special assessments (or exactions, development fees, or any other form of private finance) to infrastructure is that it limits a city's ability to shift some of the burden of financing area-wide facilities like arterial roads and sewage treatment facilities to developers. Because of such restrictions, exactions and development fees have been more effective tools for dealing with the impacts of rapid growth.

Exactions and Development Fees

Throughout their history, exactions have been viewed as an exercise of police powers. Development fees, on the other hand, can be viewed as an exercise of either police or taxing powers. The type of power underlying exactions and development fees determines the legal limitations and restrictions placed on them. In most states, cities have chosen to impose development fees under police powers because taxing powers require explicit authorization by enabling legislation. Generally, such legislation does not exist. The most notable exception to this is in California, where development fees are commonly imposed under taxing powers. In other states, development fees have been routinely overturned by the states where they were based on taxing power, either because of the lack of enabling legislation or because of the failure to comply with the constitutional provision of equal protection and due process.

legislation activity required

Exactions and Development Fees as Police Powers

The power to require exactions (dedication of land or facilities) is derived from the power to regulate land use authorized under zoning and subdivision enabling legislation. In all states, the courts have ruled that the police powers granted in zoning and subdivision enabling legislation are adequate to require dedications of infrastructure. In many states enabling legislation explicitly authorizes dedications of certain types of infrastructure in order to protect public health and safety. In other states enabling legislation grants only the power to limit and restrict the use of land in order to protect public health and safety, but the courts have ruled that required dedications of local streets and utility lines, for example, are authorized under such legislation.

classifying infrastructure

When imposing fees in lieu of dedication or development fees that are independent of dedication, most cities have also relied on the general grants of police power in land use enabling legislation. Such efforts have usually met with success, but not always. In several states, courts routinely have applied Dillon's rule, which requires explicit enabling legislation for powers granted to local governments. Alabama and Illinois are two such states, and in both states the courts overturned fees in lieu of dedications, citing inadequate enabling legislation. In Alabama the court invalidated an ordinance re-

fee imposition

quiring subdivision developers to either dedicate 0.18 acre per dwelling unit constructed or to pay a fee in lieu of dedication to fund public parks and playgrounds, noting only that the enabling legislation did not "specifically authorize the commission to require the payment of a fee in lieu of the dedication of the land as a condition of approval of a subdivision plat."[11] In Illinois the court struck down a condition that a subdivider pay $325 per lot for educational purposes, stating that:

> . . . regardless of advantages of flexibility in equalizing financial burdens that might be secured by substituting monetary charges for the dedication of land, . . . the plain fact is that the statute does not authorize this technique.[12]

In contrast, the courts in Colorado, Florida, New Jersey, Oregon, Utah, and many other states have upheld development fees that are completely independent of dedications and which have not been specifically authorized by the state.[13] Decisions in those states have upheld such fees as valid uses of police powers contained in zoning and subdivision enabling acts, even when not explicitly authorized.

The Reasonableness Standard

The requirement of reasonableness under due process has emerged as the primary standard for determining what types of infrastructure can be financed with exactions and development fees. Over the years three tests of reasonableness have emerged: (1) whether the need for the infrastructure is "specifically and uniquely attributable" to the new development, (2) whether there is a "reasonable relationship" between the public need and the conditions imposed on the developer, and (3) whether the exaction or fee would be used to the benefit of residents of the new development (the *rational nexus* criterion).

The "specifically and uniquely attributable" criterion is the most conservative and restrictive of the three. In 1961 in the now-famous *Pioneer Trust and Savings Bank v. Village of Mount Prospect* case, the Illinois court invalidated a requirement for dedication of land for educational purposes, on the grounds that the need for schools was created by the total development of the community and could not be specifically and uniquely attributed to the new development.[14] Until it was superceded in many states, this criterion was used extensively in prohibiting the use of exactions and development fees to (1) finance infrastructure that provided community-wide benefits, such as schools, parks, and recreational facilities, and (2) to finance roads and utilities that, because of their size, provided benefits to those outside a development. The criterion served essentially the same purpose that the special benefit criterion served for special assessments. It limited exactions and development fees to financing infrastructure that provided local benefits, and it made new residents pay, like all other residents, through taxes and utility charges for infrastructure that provided community-wide benefits. Because of the severe restrictions on what can be financed with exactions and development fees under the "specifically and uniquely attributable" criterion, however, new development still can impose an excessive burden on current residents in rapidly growing areas that do not use pure "pay-as-you-use" financing, as was the case for special assessments.

The Reasonable Relationship Criterion

From a regulatory or police power perspective, the reasonable relationship criterion is at the opposite end of the spectrum from the "specifically and uniquely attributable" criterion. It is the most permissive of the three. This criterion was established

in 1949 by the California Supreme Court in *Ayers v. City Council of Los Angeles.*[15] In *Ayers* the court upheld a requirement for dedication of a road abutting a subdivision that provided benefits to the community as a whole as well as to the development. The court required only that a reasonable relationship exist between the conditions imposed on the developer and the public needs generated by the new subdivision. The reasonable relationship criterion has been used only with regard to exactions, not development fees, and has been used principally to justify the exaction of roads and utility lines that either lie on or directly abut a development site.

The Rational Nexus Criterion: The Current Basis of Development Fees

The third criterion used in determining what can be financed with exactions and development fees is the rational nexus test, which conceptually lies between the other two criteria. The rational nexus criterion was first stated in *Jordan v. Village of Menomonee Falls* in 1966 and has become the basis for most development fees in use today.[16] In *Jordan* the court upheld a requirement for dedication, or fee in lieu of dedication, for school and parks, based on the costs of the portion of the facilities that was needed by the new development. In upholding the exaction and fee, the court directly aimed at the "specifically and uniquely attributable" criterion, which was the standard of the day, stating that it was virtually impossible for a municipality to prove that a new development was the sole beneficiary of public facilities. The court's alternative criterion was that only a "reasonable connection" had to exist between the costs borne by the new development and the needs it created. Under this rational nexus criterion the new development does not have to be the only one that benefits from a facility: what is important is that the revenues from the development fees be used to the benefit of those who pay them. The "rational nexus" criterion is more restrictive than the reasonable relationship criterion because new development is liable only for a portion of the costs of the facility needed by the development and not for the total cost of infrastructure from which it only partially benefits. The criterion is less restrictive than the "specially and uniquely attributable" criterion, however, because new development is responsible for a portion of the cost of *all* infrastructure that is needed to serve it and not just for the cost of the infrastructure that serves only that development. The fact that rational nexus can be used to justify developers financing of all types of infrastructure was explicitly reaffirmed by the Florida court in 1982 in *Home Builders and Contractors Association of Palm Beach v. The Board of County Commissioners of Palm Beach,* when it found that the validity of development fees depended "not on whether the money is spent on utility systems, roads or other public services," (i.e. on

equity problems

a specific type of infrastructure), but rather on whether it was spent for the benefit of the development paying the fee.[17]

possible solution

While the rational nexus criterion has gained fairly wide-spread acceptance in recent years, there are still several important issues that are overlooked by the courts when they apply a strictly regulatory or police power perspective to infrastructure finance. In some areas the courts are starting to realize that there is a public finance side as well as regulatory perspective to these issues, and they are starting to raise questions that go beyond the narrow approach of the rational nexus criterion.

Problems with Rational Nexus

There are two main problems inherent in application of the rational nexus criterion.

The first difficulty with rational nexus is a double payment problem. This problem occurs when exactions and development fees are used to finance infrastructure that traditionally has been publicly financed with taxes, utility fees, and the like. In such a situation new development pays the full cost of its own infrastructure through exactions and development fees, yet it still pays taxes and utility fees that finance the infrastructure which serves current residents. In essence, residents of new development pay taxes and utility fees as current residents do, yet they receive no infrastructure in return since theirs was paid for through exactions and development fees. This problem was recognized by the Utah Supreme Court in 1982 in *Lafferty v. Payson City*. The court said a development fee based on the rational nexus criterion was not equitable

multiple issues involved

> . . . since it fixes the entire cost of new facilities on newly developed properties without assurance that these costs are equitable in relation to benefits conferred and in comparison with costs imposed on other property owners in the municipality. For example, if the costs of maintenance and repayment of bonded indebtedness for construction of the existing system are being financed by general tax revenues, service fees, and other payments collected from the entire municipality — including the newly constructed homes — the new homes will be burdened with all of the capital costs of expanding the service capacity plus a portion of the costs of the existing one. In an effort to avoid this kind of unfairness . . . requires a different approach that imposing all costs of expansion of capacity on newly developed properties.[18]

The solution to part of the double payment problem is to deduct from development fees the present value of taxes and other payments made by the new development toward outstanding debt on existing infrastructure. If replacement of infrastructure is publicly financed, the development fee also needs to be reduced by the present value of taxes and other payments that will finance replacement of the already depreciated portion of existing infrastructure. In Florida many cities and counties are already making the first of these two adjustments. Palm Beach County's park fee, upheld in *Builders and Contractors of Palm Beach County* in 1982 — the year of the *Lafferty* decision — contained just such an adjustment.

The Dominance of Intergenerational Equity

The other major problem in applying the rational nexus criterion is more fundamental. The criterion fails to recognize that multiple issues are involved in financing different kinds of new infrastructure. In particular, the rational nexus criterion assumes that (1) there is intergenerational inequity — current residents paying for infrastructure that serves residents of new development — whenever infrastructure that provides benefits to new development is publicly financed; (2) that such intergenerational inequity is eliminated when infrastructure is privately financed with development fees; and (3) the improved intergenerational equity achieved through use of development fees is more important than the benefits of having infrastructure publicly financed redistributed among all members of society, including new residents of a city, by ability-to-pay rather than by benefits received.

These assumptions hold intergenerational equity as paramount in importance over all other issues, such as distributional equity among income classes. Decisions about how to finance infrastructure, however, should involve careful weighing of *all* issues and should be made independently for each type of infrastructure. Instead, under the rational nexus criterion, intergenerational equity is given priority over all other issues in the financing of new infrastructure development.

Traditionally, much of the infrastructure that has been publicly financed has been built and paid for by one generation on behalf of the next generation. Whenever financing of infrastructure is not on a true

Preparing the land

pay-as-you-use basis, part of the cost of infrastructure that serves new development is paid by current residents. In turn, the new residents are expected to pick up some of the cost of future development when it occurs. Under the rational nexus criterion, having current residents pay any costs of infrastructure that benefits new development is considered inequitable. That is in sharp contrast with well-established traditions of intergenerational sharing that has been an accepted part of public finance for years. Most people consider the sharing of costs between generations inequitable only when the burden of new development on current residents is excessive. Under the rational nexus criterion, however, any burden is deemed excessive. When this criterion is applied as the standard of intergenerational equity, most recent development receives a windfall, in that much of the cost of the infrastructure built to serve it was paid by prior residents, but the residents of recent development have no responsibility to fund infrastructure for development. Consequently, it is not necessarily inequitable, as assumed under rational nexus, if existing residents pay for infrastructure for new residents when infrastructure is financed with such traditional methods as taxes. Neither would a shift of responsibility to the developer for all infrastructure serving his development imply improved equity.

Furthermore, when the courts apply the rational nexus criterion to determine if development fees are regulations or taxes, they place issues of intergenerational equity above all the public finance issues associated with taxing powers. The courts make no effort at balancing intergenerational equity issues with other public finance issues when deciding if development fees are regulations or taxes on the grounds of who benefits from financed infrastructure. Instead, they make a decision based solely on the grounds of the police powers contained in land use regulations, which allow cities to regulate new development if it is deemed detrimental to current residents. But when the impacts of new development are fiscal, there are issues of taxation and public finance that cannot be ignored.

To demonstrate the narrow approach of the courts in this regard, it is helpful to look at the financing of schools. The traditional source of school funding is the property tax. Under property tax financing, owners of commercial, industrial, and higher income residential properties help subsidize schools in low income neighborhoods. Such financing is often justified on the ability-to-pay principle, in which those with the greatest ability to pay, contribute the greatest amount to general government activities. When the courts allow development fee-financing of schools on the grounds of rational nexus, redistribution of school costs is a moot point, since school costs are distributed based on who benefits. While such financing may reduce the impacts of new development on tax rates, it also undermines the redistribution that is inherent when taxes are used to finance schools. The courts make no ef-

landmark case

fort at weighing these costs of development fee financing against improved intergenerational equity.

Broadening Rational Nexus

In 1981, the Utah Supreme Court in *Banberry Development Corporation v. South Jordan City* recognized some of the broader public finance questions that should be considered by the court when determining the reasonableness of development fees.[19] The court ruled that "to comply with standards of reasonableness, a municipal fee . . . must not require newly developed properties to bear more than their equitable share of the . . . costs in relation to benefits conferred." The court then suggested seven factors that should be considered when making such an evaluation:

fee restrictions

> 1) the cost of existing capital facilities; 2) the manner of financing existing capital facilities . . .; 3) the relative extent to which the newly developed properties and other properties in the municipality have already contributed to the cost of existing capital facilities . . .; 4) the relative extent to which newly developed properties and the other properties in the municipality will contribute to the cost of existing capital facilities in the future; 5) the extent to which the newly developed properties are entitled to a credit because the municipality is requiring their developer or owner . . . to provide common facilities . . . that have been provided by the municipality and financed through general taxation or other means . . . in other parts of the municipality; 6) extraordinary costs, if any, in servicing the newly developed properties; 7) the time-price inherent in fair comparisons of amounts paid at different times.

planning basis

In laying out the above factors the court made no attempt to apply them, leaving that to the municipality. In *Lafferty* the court said,

> If properly applied, those seven factors should put the new homeowner on essentially the same basis as the average existing homeowner with respect to costs borne in the past and to be borne in the future, in comparison with benefits already received and yet to be received.

Limitations on Fees Under Rational Nexus

The rational nexus criterion is the current standard in most areas, and any city officials considering development fees should be aware of the conditions courts have placed on its use. Most of the restrictions have to do with how the fee is set and how the revenues are used. One of the best summaries on such conditions occurs in *Home Builders and Contractors Association of Palm Beach County*, where the 15th Circuit Court of Appeals of Florida summarized the conditions laid down by the Florida Supreme Court in 1976 in *Contractors and Builders Association v. City of Dunedin*. In this landmark case, the Florida Supreme Court upheld development fees under the rational nexus criterion. The conditions since have come to be known as the "Dunedin Test":

> 1. New development must require that the present system of public facilities be expanded. 2. The fees imposed must be no more than what the local government unit would incur in accommodating the new users of the system. 3. The fees must be expressly earmarked for the purposes for which they were imposed.[20]

Fees Cannot Benefit Current Residents: The first requirement prohibits the use of development fees to fund the portion of facilities that benefits current residents or residents of other communities or to fund deficiencies in the current system. In some states this requirement also may prohibit the use of development fees to pay for facilities that were built before the fee was established, and possibly those built before fees were collected, even if such facilities were specifically built with excess capacity to accommodate growth An example of such an application of this requirement is in *Mitchell and Best Co. v. Washington Suburban Sanitary Commission*, where the Circuit Court of Montgomery County, Maryland, overturned a "systems expansion offset charge." The charge went to retire indebtedness for an existing sewage treatment plant that served those paying the fee.[21]

Proportionality: The second requirement limits the fee to the financing of the proportionate share of cost of a facility that serves those who pay the fee.

Separate Accounting: The third requirement is the one that is most often used by the courts in invalidating fees. It requires that revenues from fees be maintained in separate accounts from other revenues and that they be spent specifically for the benefit of those who paid them. In 1983 in *City of Fayetteville v. IBI, Inc*, the Arkansas Supreme Court ruled further that development fees must be spent within a reasonable time or be refunded.[22]

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Harnessing Suburban Resources

Patrick Hare **Gail Price**

Planners have long speculated on the effects of an aging population on land use patterns. Now, however, the problems of recycling suburban communities have become more urgent. The effects of demographic change combined with federal cuts on social service spending have severed the inner suburbs and their inhabitants from increasingly vital social services. Gail Price and Patrick Hare recast the suburban home as an economic unit; illustrating innovative ways in which these vastly underutilized resources can fulfill their own social service needs.

The pressure to squeeze social service blood out of a local government stone may end up being greatest from those who are supposed to be guided by the classic American principle of taking care of themselves. The demand for social services can be expected to grow rapidly among middle class Americans who are becoming the "frail" elderly in postwar suburbs. It can also be expected to grow rapidly among the middle class single and working parents of the baby boom generation.

Social service needs of the very young and the very old are becoming clear as the demographics of postwar suburbs change. However, land use implications of these demographic changes are not well recognized. Lee Koppelman of the Long Island Regional Planning Board said that postwar suburbs were built with a Peter Pan mentality. Nobody thought about what would happen as the population of those suburbs began to age.

In the future, land use planning will focus increasingly on finding ways to retrofit existing suburban neighborhoods. Literature on aging indicates that "aging in place" is a widespread desire among the elderly. Sites need to be found for elderly day care, for elderly nutrition sites, and for senior centers. An adequate, affordable alternative to the car needs to be found for people who can no longer drive. In addition, funding must be found for staff and operating budgets.

At the other end of the age spectrum, recycling of older neighborhoods typically produces young, two-career and single parent households who need facilities for infant day care, after school day care, and toddler day care. They must be located where they will simplify parents' complicated journey-to-day care-to-work trips.

In many areas, the growth in need for facilities for both young and old has been temporarily met by reuse or joint occupancy of schools. However, their availability is frequently declining as neighborhoods recycle and enrollments grow. During the next few years, the growing need for facilities for the very young and the very old will occupy the time of many planners responsible for postwar suburbs. But the problem will not only be one for planners. Even if they can find land for the facilities, their local governments must also find funds to build and staff the facilities.

Peter Pan mentality

Anne Stein may represent a partial solution to this problem. She is a woman in her fifties with a large home in an attractive neighborhood. On a nice day in mid-October, she can be seen sitting on the floor of her carpeted and screened garage at the end of

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The opinions in this article do not necessarily reflect the policies of the Montgomery County Planning Board.

Caretaker Anne Stein enjoys a sunny day with one of her three-year-olds.

a cul-de-sac in Madison, Wisconsin, changing a baby's diaper. A two-year-old leans against her shoulder as Anne reaches up to Katharine Ellis, a woman in her late sixties, who is ready with a fresh baby-wipe. Anne is an inspiration. The unfinished sheetrock at the rear of her garage is a patchwork of plaques and testimonials from social service agencies and commissions. The open end of her garage is a screen frame that comes out in winter. She is the equivalent of what program planners for the Peace Corps used to call a "Super Volunteer." She is the kind of person not to design a program around because she would be so hard to duplicate. However, what she does should not be eclipsed by her own personal skill. For practical purposes, she is providing elderly day care and children's day care in her own single-family home. She is a home-based social service provider.

social service provider

Katharine, Anne's older assistant, was unresponsive before she came to Anne. She would not take baths and would not take walks. She would never have seen herself as the admiral of a small fleet of big wheelers, supervising their progress as they steamed around a cul-de-sac.

elderly day-care centers

The children Anne takes care of spend their day in a rich environment. The care is flexible. Typical group day care centers fine parents $3 to $5 per minute if they are late to pick up their children. Anne does not.

The surprising thing about Anne Stein is that while she is special, she is not unique. There are a large number of people providing child day care in their homes. Family day care, the accepted name for what Anne provides, is so common it can accurately be called a social service cottage industry. Other similar, home-based social services may be a partial solution to the problem of increasing services without increasing either public facilities or public bureaucracies.

A Need for Additional Facilities and Services

Greater participation of women with children in the paid labor force has meant that fewer family members are available to provide care for children. As a result, more children's day care is needed. Recent census updates suggest that 50 percent of all children under the age of six have mothers in the labor force. It is very likely that this trend will continue. There is also a steady and equally well-recognized increase in the growth of the older population, of whom a great proportion need services. Montgomery County, Maryland reflects this national trend. From 1970 to 1980, the population aged 75 and over grew by 58 percent (Maryland Department of State Planning, 1982). This growth continues. There is also anecdotal information that the County is receiving significant numbers of the very old coming to stay with their children, children who themselves may be in their sixties.

It is an axiom in the field of aging that about 80 percent of the care for elderly is provided by their children. The increased proportion of seniors to people aged 18-65 means there will be fewer younger people to provide care for the aging population. Also, at the same time that the need for care for both young and old is increasing, federal, state, and local governments have less resources available to assist in the provision of these services.

Provision of services requires not only staff but also appropriately located facilities. In Montgomery County, for example, the shortage of sites for children's day care is a major issue. Enrollment increases in older areas as neighborhoods recycle are pushing day care centers out of joint occupancy of schools, even as demand for the centers increases. Locations for elderly day care are expected to become an equally serious concern. Growth is expected because "...the biggest benefit of the (elderly) day care centers is that they postpone or eliminate the need to confine an elderly parent to an institution — a decision that can plague the family with guilt. With good nursing homes charging $50 to $70 a day, keeping an elderly parent at home is a finan-

cial necessity for many families".[1] Elderly day care centers typically cost less than half the daily rate of a nursing home.

A final note should be made about the need for services. Opposition to cuts in social services and demands for new and increased services often do not distinguish between those who are able to pay and those who are not. For many people in the suburbs, the issue is not one of price of services for the young and the old, but simply availability. The focus of this article is availability. It only addresses affordability indirectly. If good services can be made available by bringing underutilized resources into use, those services should be more affordable. In addition, if local governments do not have to worry as much about simple availability of services for a large sector of their populations, they will be freer to concentrate on affordability of services for those with low incomes.

Resources for Social Services

Demographic data indicates the availability of people and houses as a large potential resource with the largest group of people available to provide home-based services being women.

Despite the increase in working women, many are not in the paid labor force, especially those past their child-rearing years. Forty-seven percent of all women aged 55 to 64, and 32 percent of women aged 45 to 54, are not employed outside the home. Another less well-defined group is men who have retired or could retire but are still healthy and interested in "running their own shop." They also may be interested in a role where their relationships with other people are not structured by a bureaucracy. These women and men are an untapped human resource of tremendous potential.

There is an equivalent, equally untapped resource available of underutilized space in the homes of many of these women and men. The 1979 Annual Housing Survey shows that there are 12.2 million home-owning households in the country in which one or two persons over the age of 55 occupy five rooms or more, not counting basements or garages.

These figures are really just an index of underutilization, since many of the households included in these numbers would not consider the space they have underutilized. In addition, surplus space is not critical to some forms of service provision. Family day care, for example, may simply involve off-peak use of the living area and kitchen when the rest of the family is out.

An NBC News study entitled "White Paper on Women, Work, and Babies" reported that "the largest number of children, about 40 percent, are cared for by the traditional lady down the street." The generic term for this is family day care, whether or not the provider's children are involved. A 1982 study of day care in Montgomery County indicated that children's day care in single-family homes is a $14 million per year cottage industry. It is also recognized as the least expensive form of day care. These facts are generally true for the country as a whole. Children's day care in single-family houses is a major home-based social service. It indicates the potential of home-based services as a means of meeting other social needs. In fact, the North Carolina Division of Social Services has set standards for elderly day care in single-family homes. Reston, Virginia has a program for after-schoolers in single-family homes. The Montgomery County Department of Elder Affairs is considering home-based providers as a source of elderly day care.

bed and breakfasts

In addition to day care, the growth of the "bed and breakfast" movement to include an estimated 10,000 hosts nationwide indicates that people can be attracted to providing additional new services in their own homes.

Membership data from the American Bed and Breakfast Association shows a staggering growth in bed and breakfast reservation systems, reflecting an equal growth in the number of hosts and hostesses. A reservation system is a booking system that people can call when they want to find a bed and breakfast in a metropolitian area. According to Pat Wilson, Director of the Association, in 1976 there was only one reservation system in the country; by 1983 there were more than 75, and in March 1984, there were at least 150.

untapped human resources

In many practical ways, bed and breakfasts are similar to a social service. The differences between bed and breakfasts and other services may be a good guide to ways to structure service provision so that it attracts providers. The growth in bed and breakfasts is a strong indication that women and their homes are a relatively untapped resource that can be attracted to provide home-based services.

Problems Limiting the Growth of Home-Based Services

A preliminary review of the literature on children's day care and interviews of providers sug-

Child care service

gest several problems with home-based children's day care that limit growth. For example, due to the relative isolation of day care providers, they often lack support, professional advice, and personal associations in their work. They work five, long, back-to-back days with no respite, even for an uninterrupted coffee break. It is frequently ten hours from the time the first child is dropped off until the last child is picked up. In addition, day care providers in single-family homes generally do not have organized substitute systems, benefits, program evaluations, or vacations. The lack of a substitute system is often very hard on parents who must suddenly find a new source of day care when a provider is ill. It also keeps older women from entering the market. They remember the lack of respite from their own careers as mothers. In addition, providers are solely responsible for all support services for their businesses, such as accounting, marketing, insurance, and equipment. This means there is a learning cost that stands as a barrier to entering the market. Additional training opportunities and incentives to upgrade skills are purely self-initiated.

Resolution of these problems would permit an increase in both the quality and quantity of family day care services. Not surprisingly, the problems are being addressed by the growth of family day care "systems" which support individual providers. The systems include a wide variety of types. An example of the least formal is the Montgomery County Family Day Care Association. It provides for contact between providers, offers training courses, and represents providers on County committees. Satellite Child Care, Inc., and Central City Day Care, Inc., are non-profit corporations, funded by the city of Madison, Wisconsin to support member day care providers and to promote and maintain high standards. Their most critical services are respite for providers and reducing the isolation of providers (conversations with Ruth Kuetmeyer and Katherine Hatle, Madison, Wisconsin, October 16, 1984). Still more formal are non-profit associations like My Other Mothers — MOMS, Inc., of Alexandria, Virginia, which, in effect, recruits and franchises providers, easing market entry with training and other assistance such as billing. Cozy Loft, Inc., in the Baltimore, Maryland area, is very similar, except that it is a profit making organization.

From a consumer's viewpoint, one of the major benefits of systems is that they improve quality control. Since most consumers do not have time to analyze in detail the quality and the background of individual day care providers, the market image of a system becomes the market image of the individual providers. As a result, according to Ruth Kuetmeyer of Satellite Child Care, Inc. individual providers in a system become very concerned about enforcement of standards by the system. Their incomes depend on how well the system protects its own image by monitoring its providers.

the size of home-based systems

The size of home-based systems varies. At an informal seminar on systems of home-based services held at the Montgomery County Planning Board on February 1, 1985, Mr. Alan Pittaway, a human services economist and author of the business plan for My Other Moms, Inc., gave some background on the economics of systems for children's day care. Typically, he believes they reach a break-even point at about 12 homes, and economies of scale disappear at about 40 homes. There are systems that are much larger, typically ones that involve the Department of Agriculture food programs for day care. Generally, the larger systems are more loosely organized in the sense that the provider is more autonomous and less regulated. Systems are also under the threat of some economic pressure due to several decisions that found home-based day care providers working with systems to be employees, not independent contractors. As employees, they, and the systems they work with are required to pay

unemployment compensation. A decision of this type by the Virginia Employment Commission forced the Northern Virginia Community College Satellite Family Day Care Program to shut down.

In summary, home-based service systems are growing and becoming more sophisticated. With sophistication, however, they are encountering a host of problems. A variety of systems are now being created to eliminate or reduce the problems of providing day care for children in single family homes. The evolution of the day care systems will be critical to the development of other types of home-based social services. With an organizational model available, it is more likely that these rich networks will be implemented in communities across the country.

Designing Home-Based Social Services

From the provider's viewpoint, a primary benefit of the bed and breakfast service is its flexibility. One source of that flexibility is reliance on telephone reservation systems. A guest gets a room by phoning a reservation system. The system handles billing and accounting. It enables homeowners to "close up shop" as well as reopen, simply by calling their reservation system. It also allows the host to retain the outside visual appearance of the home. There are no signs. Finally, the reservation system allows the homeowner to operate with very low start-up costs, few billing and accounting problems, and no marketing overhead.

The flexibility of the bed and breakfast business enables women to have a professional role at home without the incessant demands of children's day care. Further, the pricing of most bed and breakfasts indicates that the hosts' rates are such that they can provide a quality service for their guests, such as placing real cream on their tables rather than milk or non-dairy creamer. The growth in the bed and breakfast movement indicates that it offers many people a challenging role that fits their self image but is not draining. It provides an opportunity for pride. If other home-based services are going to grow, they will almost certainly have to offer a similar role.

The Goal of Convincing Civic Associations

The gradual development of home-based services could result in a "service rich" neighborhood with a variety of highly flexible services, often available on foot, that could back up more formal service provision. From the point of view of many social resource planners, the idea of a service rich neighborhood would be attractive. From the point of view of many civic associations, it would be an insidious attack on the mighty fortress of single-family zoning.

a service rich neighborhood

Most civic associations feel that pure, undefiled single-family zoning, more than anything else, protects their neighborhoods against deterioration. For typical homeowners, protecting neighborhood quality means protecting both their largest financial asset and their quality of life. Many homeowners worked hard to get where they are and are not interested in any change that involves risk. However, their resistance to change may be due to the fact that they do not realize that the majority of households in single-family neighborhoods may no longer be traditional nuclear "families."

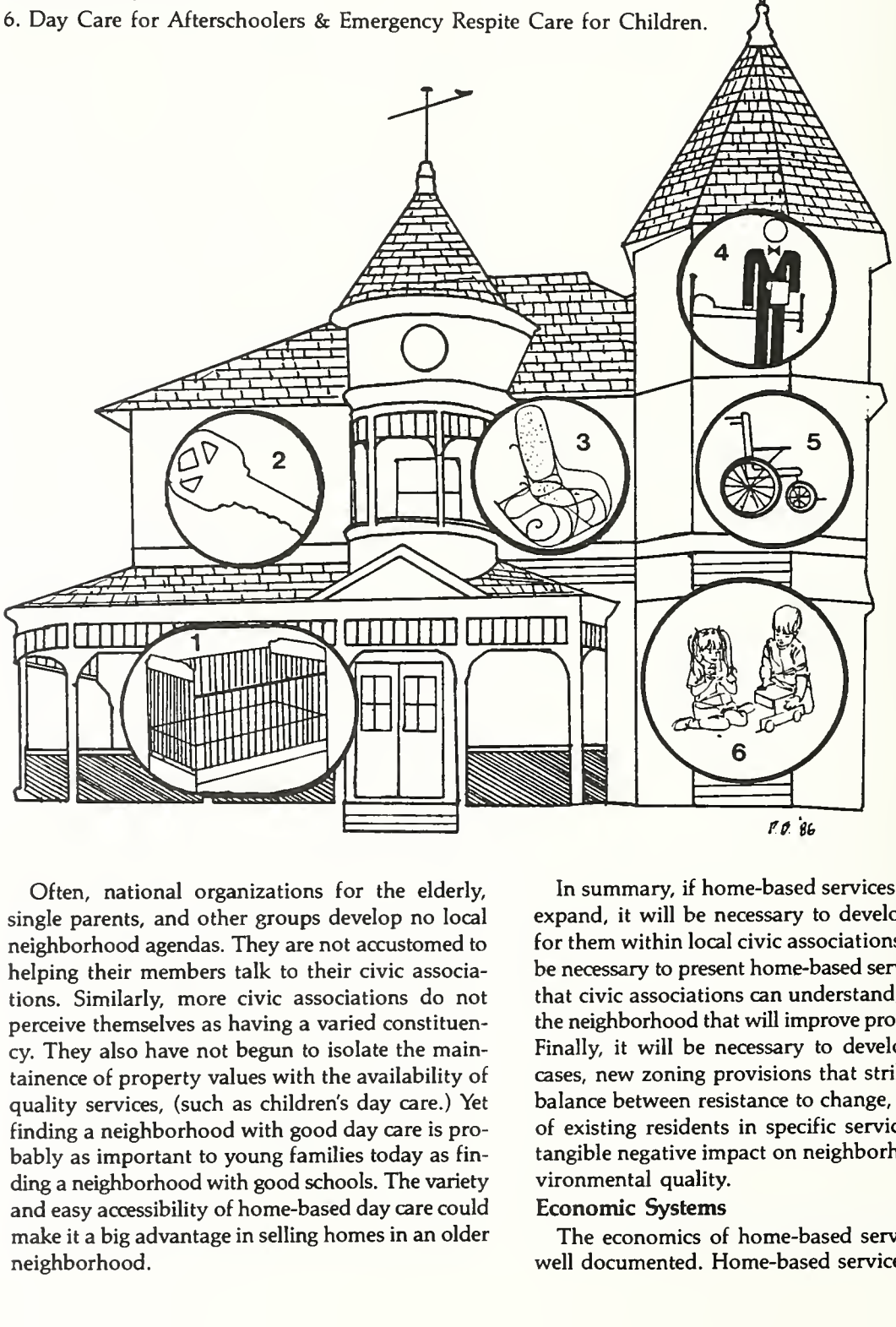
The actual constituency of civic associations in older neighborhoods is often primarily composed of a variety of special interest groups, such as working parents, single parents, latch-key children, and the frail elderly. For many of these people, neighborhood quality may not just mean clipped lawns and property values, but also the easy accessibility of needed services.

a primary benefit — flexibility

A cozy gathering at a bed and breakfast

Examples of Home Based Social Services

1. Day Care for Infant & Toddlers and Child Sickness Centers.
2. Day Care for Afterschoolers.
3. Elderly Bed & Breakfast Style Respite Care.
4. Bed & Breakfasts.
5. Elderly Day Care.
6. Day Care for Afterschoolers & Emergency Respite Care for Children.



local neighborhood agendas

Often, national organizations for the elderly, single parents, and other groups develop no local neighborhood agendas. They are not accustomed to helping their members talk to their civic associations. Similarly, more civic associations do not perceive themselves as having a varied constituency. They also have not begun to isolate the maintainence of property values with the availability of quality services, (such as children's day care.) Yet finding a neighborhood with good day care is probably as important to young families today as finding a neighborhood with good schools. The variety and easy accessibility of home-based day care could make it a big advantage in selling homes in an older neighborhood.

In summary, if home-based services are going to expand, it will be necessary to develop advocates for them within local civic associations. It will also be necessary to present home-based services in ways that civic associations can understand, as assets to the neighborhood that will improve property values. Finally, it will be necessary to develop, in many cases, new zoning provisions that strike a delicate balance between resistance to change, the interests of existing residents in specific services, and any tangible negative impact on neighborhood and environmental quality.

Economic Systems

The economics of home-based services are not well documented. Home-based services may offer

a way to expand social services without additional facilities and bureaucracies by capping underutilized resources. In principle, it sounds workable. In practice, if it were that easy, there would be more home-based services available.

The critical issue seems to be whether or not a service provider can get enough personal satisfaction and income out of providing a service and still leave leftover income for a "system." The system must be supported because it makes the provision of services a job worth doing from the provider's viewpoint. It reduces problems with billing, insurance, marketing, and regulations. It reduces start-up costs and risks of failure. It also increases professional status and opportunities for professional contact.

From a public point of view, the system is equally critical because it addresses directly the need to increase service provision. It can provide start-up funding, resources and training, and offer operating methods that make failure a remote possibility. The problem is that the cost of the system itself must be paid for. In the bed and breakfast business, with its rapid growth in both hosts and reservation systems, it is clear that hosts can get what they need and still support the reservation systems. In some cases the reservations systems for bed and breakfasts take up to 35 percent of the price paid for the bed and breakfast by a guest. Allan Pittaway, the human services economist mentioned earlier, estimates that in a good system a family day care provider could get all of the support of the system for about 12 percent of the hourly cost to the parent. From the provider's viewpoint, the issue is whether or not the workload is eased enough, or the priced moved up enough because the service is better, so that her or his life is improved by the system.

For other services, the percentage taken by the system will obviously vary with the type of service and the market rate for similar services against which home-based providers have to compete. It may vary as a system includes more providers so that overhead is used more efficiently and spread over a greater number of providers. Finally, as in the case of the day care systems in Madison, Wisconsin, units of government may want to subsidize the development of systems because they feel that it is an efficient way to stimulate service provision. At this point, however, it is clear that the potential for increased service provision using home-based services depends on a better understanding of the economics of systems. That understanding must cover both the costs of starting up a system and the savings it achieves when it has developed enough members to achieve operating economies.

It should also be noted that the idea of systems may be supportive of many of the goals of the potential providers of home-based services. Many of them will probably be women. A significant proportion of those women would probably avoid service provision in the home, or at least be skeptical of it, because it would be assumed that anything like family day care would offer no opportunity for career advancement. However, either a system operating independently, or a system that satellites off an existing provider, ties providers into a structure with opportunities for administrative roles.

The economics of systems are very relevant to this point. Allan Pittaway estimates that it would cost $25-50,000 to start a system with the variation reflecting primarily the developer's need to support herself or himself during the start-up period. That is a scale of capital many people can come up with, particularly if it can be reduced by economizing on start-up costs. Those costs include a place of business, outside help, a telephone, printing, advertising, insurance, and equipment for the homes of providers. Some of those costs lend themselves to savings through, for example, using the home and the home telephone as an initial, if not permanent, place of business. They also lend themselves to savings where the initiator is an existing service provider that is establishing a system of satellites.

economics of systems

Mr. Pittaway feels that the returns on systems are not high enough to attract investors. They are probably high enough, however, to encourage initiatives by social service centers who want to expand. The return on systems is also probably high enough to attract investment from women who want to develop their own businesses and to do so based on more traditional women's roles and skills they know they already have basically in hand. In particular, starting a systems of home-based services may be an opportunity for a woman who can rely on family income while she gets started.

Systems add the possibility for career growth to home based services and thereby makes them an attractive opportunity for women entering the work force. Systems also offer the possibility of expansion to existing service providers, and thereby make home-based services an attractive outlet for frustrated idealism of many social service professionals. The apparent responsiveness of systems to the needs of these two groups of people is probably the critical link that will cause the development of

home-based services.

As a final note, it should be pointed out that the economic issues are also political issues. An effective case for initiatives in home-based services probably can be made only by showing that governments can save scarce social service dollars by promoting home-based services and the systems that make them work.

Home-Based Services are Non-Institutional

Bud Grosshans is a retired, 61-year old university professor in Montgomery County. He became involved in family day care when he began providing day care for his granddaughter and found he enjoyed it. He also runs an accounting business in his spare time. His view of the economics of his family day care business probably reflects the economics of home-based services generally: "It adds a little bit of money to my life, and a hell of a lot of meaning." Another perspective on the economics of home-based services was given by Sylvia Thorpe, who also runs a family day care center in her home in Montgomery County. She has a small center for up to 12 children. When asked about her career choice, while standing in her sunlit yard full of children, she pointed out that she has an advanced degree in biology. Before she started her center, she had a successful career in which she spend seven years dissecting rat livers in a basement laboratory. She was not sorry about her choice.

little money, lot of meaning

Home-based services can add to the quality of life of both the providers and the people being served. They offer hope for reversing the trend toward institutionalilzation of services. The introduction to this article discussed how a Madison, Wisconsin family day care provider gave new vitality to an older woman by not only providing care for her but giving her an opportunity to assist with the children. Anne Stein's use of Katherine Ellis in providing day care in Madison, Wisconsin is unique in part because it is the kind of individual response to a situation that larger forms of service provision make more difficult.

quality of life

Assuming that home-based services make sense in both human and economic terms, land use planners will probably be the ones to assist or restrain their development more than any other professional group. First, planners are the ones who have to propose compromises between legitimate fears of change and legitimate needs for change. They have surprising power as the gatekeepers or brokers of whether or not new uses get written into the zoning ordinance. Second, land use planners are in a position to see, better than most others in local government, how the needs for new services and facilities for both the young and the old fit together. They are also, unlike any other part of local government, in a position to see how these services and facilities fit into the existing fabric of land use and transportation. Third, planners have a sense of the resources that are being underutilized in many of our neighborhoods because no other professionals have the same mandate to review, monitor, and maintain neighborhood quality of life.

Bud Grosshans' house is not just a family day care center. It is a stopping point for children walking home from school on a snowy day. It is also a symbol of the quality of life that could be available in a neighborhood rich in home-based services. Bed and breakfasts where grandparents can stay across the street when they visit, a house a few blocks away where an elderly aunt can stay while the family spends a weekend camping, and other similar additions to a neighborhood could help dissolve the ticky-tacky image of postwar single-family neighborhoods. That image, frozen on the national psyche in the sixties, portrays a single-family neighborhood where nothing goes on but single-family life. In practice, it is probably not an accurate image. There have always been religious support organizations, baby sitting coops, and a wide variety of other kinds of service exchange networks. Many of the services discussed in this article already exist on some scale in most neighborhoods.

The expansion of home-based services seems to offer a means to provide new services at a time when money for new facilities and new staff is not available. In addition, those service offer flexibility, accessibility, and variety that would otherwise not be available, with or without any public support or subsidies.

Something Old/Something New

In land use planning, the sense of opportunity is usually only associated with the development of something new: new shopping malls, new neighborhoods, or new towns. Home-based services provide a sense of opportunity for postwar neighborhoods. In this case the opportunity will probably take a long time to realize. Working something new in with the fabric of something old is often more difficult. However, the result is also often more satisfying. Home-based services offer

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Community Impacts of New Industrial Development

Harvey Goldstein

As the industrial base of Southeastern states increases its orientation toward new, oftentimes "high-tech" businesses, so too does the need for awareness of potentially positive or negative impacts on these communities. The following article discusses means of estimating these impacts with respect to local labor markets, occupational health, employment stability, energy use, and several others.

Introduction

Within the past five years, some fundamental changes in the industrial structure of the Southeast have occurred. Traditional industries such as textile, apparel, and tobacco have lagged or declined in their historical growth trends. In the meantime, industries which never had more than a token presence in the Southeast (e.g. fabricated metals, machinery, electrical and electronic equipment, transportation equipment, and scientific instruments) have emerged.

In our desire for economic growth and employment expansion to compensate for employment losses in our traditional industries, we may often skip performing community impact analyses of new industrial development. This is particularly so when the emerging industries are perceived as "clean" and new "high-tech". Yet, we argue, community impact analyses of new industrial development are more important than ever, and for the very reasons just cited. The fact is, the impacts of industrial development vary widely even among so-called emerging, or high tech industries. When we consider that the magnitude of some types of impacts depend upon such factors as a community's size, economic base, and labor force characteristics, the variation in community impacts is even wider.

In this article, the types of direct impacts that local governments should consider when evaluating potential industrial development in a community are discussed.[1] We identify potential sources of information and discuss how planners can use available data to make reasonable estimates of the likely impacts in local settings. Care is also taken to point out specific limitations in existing data and what type of adjustments to the "numbers" may be needed to make them as valid as possible for North Carolina communities.

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The data and discussion focus on 25 key industries. While we have concentrated on growing industries, especially "high tech" industries, we have also included several traditional North Carolina industries for comparative purposes. Most of the data are presented in the form of *operating ratios* (in most cases, units per employee at the SIC three digit level of industry detail) in order to maximize comparability and to reduce the effects of scale on interpreting the data.

sources and limitations

Information on industrial impacts can be useful to local planners and policy makers in several ways. First, the operating ratios can be multiplied by projected employment increases to arrive at rough estimates of total impacts from specific industrial development activities. The impact estimates can then be translated into demands for particular services or additional burdens placed on existing public facilities. Secondly, the information can be used to evaluate the benefits and costs of *alternative* types of development for a community. This is particularly valuable at the stage of designing industrial development strategies.

Quality assurance. Zebulon, NC

Yet because good data are very limited in availability, the results of analyses of industrial development impacts must be used with caution. Data on existing operating characteristics are often unavailable in the degree of geographic or industry detail needed while there may be substantial heterogeneity and variation among more detailed industries and among specific enterprises of the same industry. Also, even if appropriately detailed data are available for current industrial activities, there is no guarantee that operating ratios will remain the same in the future. Technological change may lead to important changes in operations, and thus impacts. For these reasons the analyst should use the data sources referenced here as a *starting point for an analysis of local impacts.* The local planner should consult local sources of information to determine how local conditions may influence the operating ratios. Whenever possible, *recent trends* as well as current conditions should be examined. The analyst can then make appropriate adjustments to the published data to arrive at more accurate estimates of potential impacts in his/her community.

a starting point

Direct Local Labor Market Impacts

Labor market impacts in a community are perhaps the most important and most visible ones of industrial development. Increasing employment and income is a primary goal of local economic development planning efforts. Therefore, it is important for local officials to thoroughly examine the implications of a proposed development for the local labor market. Of course the level of the effect on the local wage structure is usually a major interest. Effects of industrial development on the stability of employment and occupational health and safety are also considerations in assessing the quality of employment opportunity. Examination of the occupational structure can provide insights into the issues of whether jobs created will go to current local residents or to new residents moving to the community, and what job training programs may be needed at local schools and community colleges.

Wages. In considering the impact of a prospective new industry, local officials will first need to determine what wage levels can be expected and how they compare to wages offered by existing employers. The North Carolina Employment Security Commission (NCESC) publishes data on wages paid to workers covered by unemployment insurance.[2] Average weekly wages is computed from total wage payments by dividing first by the average monthly and then by 52 weeks. This indicator is not a true representation of the wage rate,[3] and may not be consistent with wage rates quoted by employers or other sources. However, it does provide a good indication of worker's purchasing power, since it combines the influence of wage rate and hours of employment. It also has the advantage of including both production and nonproduction workers in an industry. This data can be used to compare the wage levels paid by a proposed industry in the state with those of industries currently operating in the local area. NCESC also provides average weekly pay by county for all private employers. These data are useful for purposes of comparison.

If the industry in question is a newcomer to the state, national wage data may be more appropriate, since the few North Carolina firms that may already exist may not be representative of the industry as a whole. National data are also valuable because they provide greater industry detail than data at the state level.

Distribution of wages and fringe benefits. The U.S. Bureau of Labor Statistics collects information on

the occupational and geographic distribution of wages in periodically published *Industry Wage Surveys* and *Area Wage Surveys*. These reports contain data on employment and earnings for hourly workers by detailed occupations. In addition, they have information on method of wage payment, shift differential provisions, fringe benefits, and description of major occupations. The data included vary from industry to industry. Most reports (but not all) include national totals. They may also include data for census multi-state regions and/or selected metropolitan areas. The emphasis is on production workers, but some reports include data on professionals (for example, drug manufacturing), technicians (semiconductors) and clerical workers (semiconductors).

Wage levels for a given industry will vary from area to area within the state according to the tightness of the local labor market and the occupational mix required by the operations conducted in a particular location. The metropolitan-nonmetropolitan industry wage differential is the most relevant one for North Carolina and the Southeast region as a whole.

A final source of wage distribution data in North Carolina is an Employment Security Commission annual report of *Wage Rates in Selected Occupations*. This report gives a statewide breakdown of wage rates by occupation and industry. Also included are breakdowns by occupation for the multicounty planning regions. Unfortunately, many occupations of interest are not included.

Occupational health and safety. In assessing the employment opportunities to be provided by a prospective industry, local officials should consider not only wages, but also the health and safety record of the industry. Table 1 includes data on the incidence of occupational injuries and illnesses in North Carolina industries. Total cases per 100 full-time employees indicates the incidence of all kinds of work-related injuries and illnesses, regardless of severity. Lost work day cases per 100 employees is a measure of the incidence of more severe events.

This data gives an accurate picture of short term health impacts of employment. However, it is likely that cumulative, long-term effects of exposure to a particular work environment are not adequately represented by annual incidence rates. Industry specific sources will yield additional information.

Employment stability. The stability of employment is another industry characteristic of concern to local officials. Two aspects of stability must be considered. The first type of stability is seasonal or cyclical. The Employment Security Experience Rating presented in Table 1 gives an indirect and average measure of an industry's history of stability in the state. This rating is actually the percentage of taxable wages that employers must pay into the unemployment insurance fund. The base rate is 2.7%. After three years a new employer is eligible for an adjustment upward or downward according

Table 1

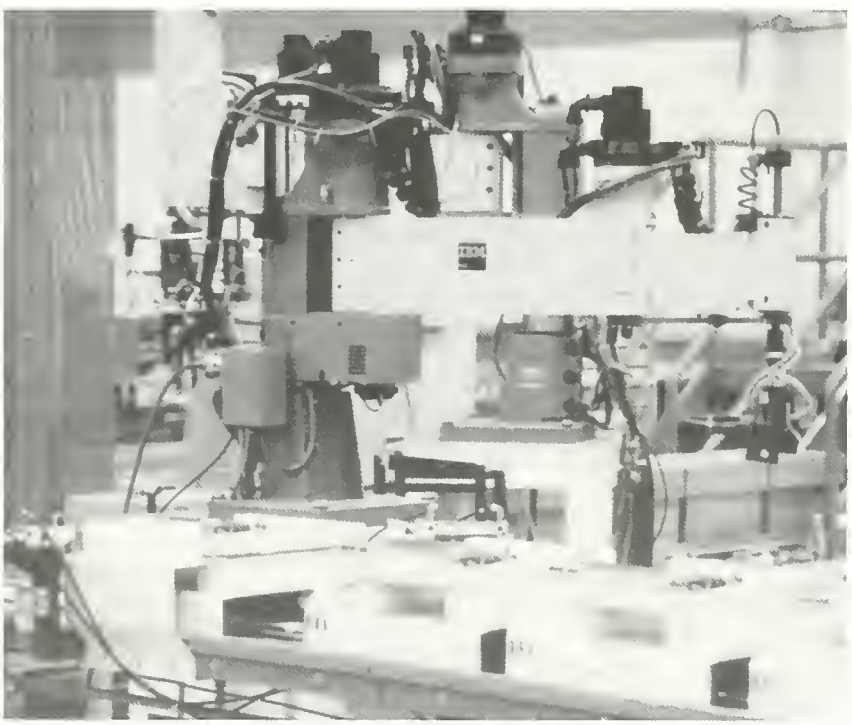
Non-wage Indicators of Job Quality:
Occupational Safety and Employment Stability,
North Carolina

Industry	Injuries & Illnesses per 100 full-time workers, 1979: Total Cases	Lost Workday Cases	Employment Security Experience Rating
Meat Products (201)	13.9	6.0	1.79
Beverages (208)	14.8	5.4	1.62
Knitting Mills (225)	6.6	2.4	2.18
Yarn & Thread (228)	10.0	2.5	1.72
Men's & Boys' Furnishings (232)	6.1	1.8	2.35
Household Furniture (251)	12.0	3.4	1.99
Plastics & Synthetics (282)	3.3	1.0	1.94
Drugs (283)	6.0	2.2	1.76
Industrial Organic Chemicals (286)	5.4[6]	2.0[6]	1.79[1]
Hose & Tubing (304)	12.1[2]	5.3[2]	2.20[2]
Miscellaneous Plastics (307)	13.7	5.2	2.20[2]
Nonferous Rolling & Drawing (335)	13.5[5]	5.5[5]	2.33
Fabricated Structural Metals (344)	19.7	7.1	2.07
Metal Working Machinery (354)	9.9	2.9	2.14
Construction Machinery (353)	11.3[4]	3.7[4]	1.93
General Industrial Machinery (356)	14.9	4.7	2.10
Office & Computing Machinery (357)	4.7	2.7	1.59
Electrical Industrial Apparatus (362)	6.0	2.1	1.87
Household Appliances (363)	6.0	1.9	2.68
Communication Equipment (366)	4.3	1.4	1.69
Electronic Components (367)	6.0	1.0	2.40
Motor Vehicles (371)	11.7	4.6	2.20
Engineering & Scientific Instruments (381)	7.5[3]	1.2[3]	1.63ffl
Measuring & Controlling Devices (382)	7.5[3]	1.2[3]	1.63[3]
Medical Instruments & Supplies (384)	7.5[3]	1.2[3]	1.63[3]

[1]refers to SIC 286 and 289
[2]refers to SIC 30
[3]refers to SIC 38
[4]refers to SIC 35
[5]refers to SIC 33
[6]refers to SIC 28

Sources:
North Carolina Department of Labor, *Occupational Injuries and Illnesses, 1979*
June, 1981: Injuries and Illness Rates
Bureau of Employment Security Research *North Carolina Insured Employment and Wage Payments 1980: Experience Rating*

to the balance in the employer's account. An employer who has had few layoffs, and hence few charges to his account for benefits to unemployed workers, is rewarded with a lower tax rate. Therefore, a lower experience rating indicates greater stability of employment. It should be noted, however, that the 2.7% rate assigned to new firms for their first three years is not related to their historical or potential stability. To the extent that an industry group includes a high proportion of new establishments, the experience rating's validity is diminished.



High-tech machinery

long term prospects

The second aspect of stability is the industry's long-term prospects for stability and growth in a local area. U.S. Department of Commerce publications such as the annual *U.S. Industrial Outlook* and its reports of specific industries, as well as trade journals, provide important information about developments in an industry's technology, the demand for its products, and the international competition it may face. Local officials should investigate whether the industry is growing or declining. Also, they will want to assess: (1) the likelihood that the firm will relocate later to find cheaper labor or better conditions, and (2) the prospects for technological changes which may lead to the net elimination of jobs.

Occupational structure. Examination of the occupational structure of a prospective industry is an essential step in studying the impact of proposed industrial development. Data on occupational demand can be combined with information on local labor supply to determine training needs and to estimate the extent of inmigration that may be expected.

Data on the "average" occupational structure within an industry is available at both the national and state levels from industry-occupation matrices. These matrices are constructed from the results of sample surveys sent to firms every three years. Each cell in the matrix indicates the proportion of employment in a given occupational category for a given industry. Since occupations are often classified into aggregate categories such as professional and technical, managerial, clerical, operatives, etc., one can easily compare the occupational structures of different industries, e.g. proportion professional and technical, from the information in the industry-occupation matrix.

Once the average occupational structure of a given industry has been identified, a supplement to the Dictionary of Occupational Titles, *Selected Characteristics of Occupations Defined in the Dictionary of Occupational Titles* can be used to describe the physical demands, environmental condition, required math and language development and specific vocational preparation (SUP) for each occupation. The SUP is of particular interest because it indicates skill level of the occupation. Training times are divided into nine categories ranging from a short demonstration to 10 years of preparation.

The data on occupational demand must be combined with local labor supply data to address the question of how new jobs will be filled. Data on labor force characteristics for substate areas are often lacking in quality and comprehensiveness but a reasonable picture can be pieced together from a variety of sources. There are four possible sources of employees for new job openings:

1) The unemployed
2) New labor force entrants
   (a) graduates of schools and colleges
   (b) other new entrants
3) The currently employed
4) Migrants from other localities

Data on Job Services registrants, available by county by special request to the Employment Security Commission, is the best service for demographic

information about the unemployed. Knowledge of the occupational structure of local industries who have recently laid off workers provides the most direct source of information on the magnitude of local unemployed skilled workers.

New employment opportunities may attract previous nonparticipants into the labor force. Labor force participation rates lower than the state average are an indication of a potential for expanding participation. The decennial census provides the needed labor force participation information, but it becomes quickly outdated. The North Carolina Employment Security Commission *Annual Planning Reports* provide participation estimates for labor market areas. Secondary workers (primarily women and teenagers) are most likely to be drawn into the market. In rural areas, unpaid family farm workers may seek employment. These new workers will probably be able to fill primarily low-skilled jobs. Graduates of local technical institutes and colleges are a source of professional and technical workers. The North Carolina Employment Security Commission publishes state-wide labor supply data which includes numbers and specialties of graduates. Local data may be obtained directly from the educational institutions. It is necessary to bear in mind that not all graduates are labor force entrants. Appropriate adjustments should be made to take into account graduates who are upgrading their skills but retaining their present jobs.

If the new industry provides more attractive opportunitites than those available in existing firms, some employed workers may leave their jobs to accept employment with the new firm. Wages in existing firms will be bid up by the competition for labor. Local industry employment data (from the Employment Security Commission or from the annual U.S. Department of Commerce *County Business Patterns*) and data on occupational structure (from the industry-occupation matrix) can be used to estimate the number of local workers who have the requisite skills. Industry wage comparisons may suggest whether currently employed workers will find the new jobs sufficiently attractive to leave their present jobs.

If there are gaps between the skills that local residents can supply and those that are demanded by a new industry, the community may want to develop training programs which will help local residents qualify for the new jobs. At least in the short run before new training programs can begin to graduate students in sufficient volume, the demand for highly skilled professional and technical workers which cannot be met by local residents will most likely be filled by inmigrants to the area.

Industry innovation

The Land Consumption Impacts of Industrial Development. A community must reserve an adequate amount of suitable land for industry in order to have orderly economic development. The community can use zoning ordinances or techniques such as public land banking to reserve a supply of appropriate land and to assure compatibility of adjacent land uses. Reasonable projections of industrial land requirements are important. A shortage of land held for industrial uses may impede industrial development. Overzoning for industry can act as a deterrent to industrial growth as well. If too much land is designated for industry, scattered development may result in inefficient use of community facilities and infrastructure. Also pressures to use some of the industrial land for other uses may be great and haphazard development could result.

land consumption of industries

The first step in projecting demand for industrial land is to acquire an understanding of existing patterns of industrial land consumption. Manufacturing firms need land for production, for storage of materials and finished goods, for administrative and other support activities, for parking, and for driveways and walks. Most plants will require additional land for landscaping and future expansion. Industries involving new material processing such as chemical plants and primary metal plants are usually land intensive. Capital intensive industries tend to be land intensive. Warehousing and distribu-

tion activities require large amounts of land. On the other hand, labor intensive industries such as instrument manufacturing, electronics, and other operations which require highly skilled professional and technical workers generally require less land per employee. While production technology and scale of operations are important determinants of land requirements, industry planners have a degree of flexibility in choice of building and site design. We would expect land consumption to vary among areas according to land availability and price. Total land area is more variable than floor space among different locations for the same type of industrial activity.

Land use consumption patterns by industry change over time. Planners may need to adjust information on existing land use patterns to reflect expected future changes. The general trend in most industries has been toward greater use of land per employee or per volume of output. As industries modernize plant and equipment, floor space required per employee usually increases. In addition, the ratio of building to total land area has been declining as new one-story plants have replaced older, taller structures and as more land has been used for parking and landscaping. Whereas ratios of building to total land area of 0.80 percent and more are common for industrial sites developed before World War II, more recent recommended ratios for planning purposes have been 0.25 or even less (Kinnard, Messner, Boyce 1979).

traffic congestion

An aerial view of the IBM facility in Research Triangle Park

Transportation Impacts. Closely related to patterns of land consumption are transportation impacts. An increase in employment may be expected to increase the volume of traffic in the area. The significance of this impact depends on the location and siting of the firm. Most of the traffic generated by a manufacturing firm is comprised of employee daily commuting trips. The movement of materials, final products, and customers is comparatively small. The employment density is the primary determinant of traffic impact. Transportation planners have recommended using trip generation rates like those presented in Table 2 to estimate traffic volume.

Table 2

Industrial Traffic Generation

Type of Industry	Employees/acre (sq. ft. land/employee)	Trips/Acre/Day Range	Typical
Automated Industry	5 (8712)	2-8	4
Light Service Industry	5-20 (8712-2178)	6-30	16
Machinery Factory	20-100 (2178-436)	30-160	70
Research Industry	100 (436)	150-200	170

Source: Marks (1971)

Small, dispersed firms place little strain on the road system. If a new firm located near residential areas reduces commuting distance, it may actually cause a reduction in traffic. Large firms, however, may contribute to traffic jams. Planning adequate access to the site must be given careful attention. Mass transit and van pools might be encouraged to reduce traffic impacts. The impacts on the use of specialized facilities such as airports should also be examined.

Impacts on Water Consumption and Use. Local planners will want to investigate the water consumption of prospective industries regardless of whether their water needs are to be met by public or private water systems. The data presented in Table 3 provide a rough idea of comparative water use among industries. Because of large variability among establishments in the same industry no better than a "ball park" estimate of water consumption by a particular establishment in a particular location can be made. Water consumption is sensitive to changes in production technology and to conservation practices. Different processes requiring different amounts of water may exist for making the same product. In addition, if water scarcity or high rates provide the needed incentives, water can often be recycled or otherwise conserved.

To calculate a reasonable estimate of water demand by a proposed firm, the planner should gain an understanding of how water is used by the industry and what the potential for water saving technology is. Armed with this information, the planner may seek to influence plan designers to plan for recycling water if there is concern that the industry's demand for water will strain available water supplies.

The U.S. Department of Commerce 1978 Water Use Survey, included in the 1977 *Census of Manufacturers* is a good place to start to get this information. The statistics on water intake (see columns 1 and 2 on Table 3) provide data on the demand placed by major water using firms on water resources. Comparison of water intake with gross water used (see column 4) gives an idea of the extent of recycling practices. If water intake is a small percent of gross water consumption; this means that the practice of water recycling is extensive. If a new firm decides not to use recycling, its water intake will be much higher than the industry average. The water use survey also indicates the proportion of an industries water supply that is drawn from public water supplies (see column 3 of Table 3) and from ground and surface sources. Generally, the larger water users are more likely to have their own private water supply system. Finally, the survey indicates how water is used — in actually processing the product, for power generation, for heating and cooling, and for employees' drinking and sanitation.

This published data is only a beginning. Industry sources must be consulted about technology available to the industry and the specific plans of the local establishment. In addition, the Water Supply Branch of the Department of Human Resources in cooperation with the U.S. Geological Survey has conducted a survey of water use by self-supplied industries. The data is not reported by industry, but it is possible to locate data for specific establishments. The survey contains data on the amount and purpose of water use, as well as on conservation measures employed.

Impacts on Energy Use. New industry demand for energy may be of concern to local planners. Of interest is the amount and type of energy as well as the time pattern of consumption (for electricity). Table 4 provides ratios of energy use to employment by industry.[4] An industry's energy consumption depends not only on the particular facility's level of output and employment, but also on the efficiency of the particular technology in producing and transmitting industry. Since new technology is generally more efficient than old, the energy coefficient in the table should probably be adjusted downward in estimating the energy consumption of a new plant.

Consumption of electrical energy is of particular concern to policy-makers because the increased demand for generating capacity has more direct and immediate impact on North Carolina consumers

Table 3

Water Use by Selected Industries

	Avg. 1978 Intake establishment million gal/day (Column 1)	Avg. Intake/100 Full-time employees[2] 1000 gal/day (Column 2)	% of Industry Water Intake From Public Systems (Column 3)	Intake as % of gross water use Industry Average (Column 4)
Plastics and synthetics (282)	8.067	21.5	11	25
Drugs (283)	2.681	10.1	17	37
Industrial Inorganic Chemicals (286)	25.694	75.9	14	38
Rubber and Plastics Hose and Tubing (304)*	1.308	17.1	27	51
Miscellaneous Plastics (307)*	1.452	1.2	45	66
Nonferrous Rolling & Drawing (335)	1.739	3.7	26	11
Fabricated Structural Metal Products	0.457	0.4	88	51
Metalworking Machinery (354)	0.484	0.6	71	70
Construction and Related Machinery (353)	0.758	1.0	24	16
Office & Computing Machines (357)	1.218	3.0	61	54
General Industrial Machinery (356)	0.360	0.5	59	18
Electrical Industrial Apparatus (362)	0.455	1.0	79	51
Household Appliances (363)	0.769	1.9	73	48
Communication Equipment (366)	0.530	0.6	71	11
Electronic Components (367)	0.588	0.7	76	19
Motor Vehicles & Equipment (371)	2.507	1.9	75	24
Engineering & Scientific Instruments	0.194	2.4	INA	54
Measuring & Controlling Devices (382)	0.367	0.9	82	73
Medical Instruments & Supplies (384)	0.247	1.0	96	92
Meat Products (201)	0.788	0.9	49	81
Beverages (208)	1.199	1.8	45	INA
Knitting Mills (225)	0.562	0.9	82	80
Yarn & Thread Mills (228)	0.438	1.0	64	19
Men & Boys' Furnishings (232)	INA[3]	INA	INA	INA
Household Furniture	INA[3]	INA	INA	INA

Data based on a national survey of establishments that reported water use of more than 20 million gallons per day.

[1]Daily intake computed from annual figure on basis of 300 production days/year

[2]Computed from production worker hours divided by 200,000 hours/100 employees, making the assumption that establishments surveyed comprised equal proportions of total "full-time worker equivalents" in all industries

[3]The apparel industry was not surveyed. It uses very little water. Data on household furniture was withheld because of the small number of respondents.

Source: U.S. Department of Commerce Bureau of the Census, *1977 Census of Manufacturers.*

Table 4

Energy Consumption of Selected Industries

	Billion BTU per 100 full time workers per year
Meat Products (201)	42.5
Beverages (208)	110.6
Knitting Mills (225)	28.4
Yarn & Thread Mills (228)	30.4
Men & Boys' Furnishings (232)	4.5
Plastics & Synthetics (282)	400.7
Drugs (283)	90.4
Industrial Inorganic Chemicals (286)	1209.4
Rubber & Plastics Hose & Belting (3041)	82.9
Miscellaneous Plastics (3079)	34.6
Nonferrous Rolling & Drawing (335)	112.7
Fabricated Structural Metals (344)	20.9
Construction & Related Machinery (353)	29.2
Metalworking Machinery (354)	14.5
General Industrial Machinery (356)	23.6
Office & Computing Machines (357)	14.9
Electrical Industrial Apparatus (362)	30.7
Household Appliances (363)	29.8
Communication Equipment (366)	13.1
Electronics Components (367)	15.6
Motor Vehicles Parts & Accessories (3714)	40.4
Engineering & Scientific Instruments (3811)	12.9
Measuring & Controlling Devices (382)	11.3
Medical Instruments and Supplies (384)	14.5

Source: U.S. Bureau of the Census, *1977 Census of Manufacturers.*

than does demand for other forms of energy. North Carolina industries depend more heavily on electricity than does industry nationally. Industrial users represent 36.6% of all electricity consumption in the state. Electricity comprises approximately 52% of industrial energy use. In examining use of electrical energy it is important to examine not only total consumption, but also the time pattern of electricity use. Is electricity demand spread evenly through the day and the year, or are there peaks and valleys? If there are peaks, how do they relate to the time of peak loads?

Direct Impacts of Industrial Development on the Natural Environment. Possible degradation of the natural environment is an issue which must be addressed in any assessment of industrial impacts. The need to preserve a healthful and attractive environment for all existing residents and for future generations may at times come into conflict with immediate needs for creating jobs and raising earned incomes in the community. We have identified three

healthful and attractive environment

state or local government functions relevant to industrial impacts on the environment. First, in administering regulatory programs, government agencies must make decisions about specific firms operating (or proposing to operate) at specific sites. Secondly, in choosing strategies for development, economic development planning groups should consider environmental impacts, along with other industry characteristics to determine which are most desirable overall. Finally, local governments are responsible for safely disposing of liquid and solid wastes. Each of these functions has its own distinctive information requirements.

Effective environmental management requires detailed technical information about the amount and composition of discharges and emissions and about the available technology for reducing pollution as well as information about existing air and water quality in the surrounding area. Agencies responsible for administering regulatory programs must decide on the pollution control equipment and monitoring procedures that will be required in specific cases in order to insure that relevant effluent and emission standards will be met. Though regulatory agencies must be equipped to evaluate its quality and completeness, the industries themselves are the source of much of this information. They must provide the details of their production processes and pollution abatement technology when they apply for required environmental permits.[5] Where they are required, environmental impact statements provide more comprehensive information. Local governments in North Carolina generally do not require environmental impact statements for new plants. While the State Environmental Policy Act empowers local governments to pass ordinances requiring impact statements, very few have used this power. Another state law (N.C.G.S. 143-B) directs the Department of Commerce, with the help of the Department of Natural Resources and Community Development to evaluate the impacts of any new or expanding industry on the natural and economic environment. State government officials are presently debating how to implement this provision.

As a part of its economic development planning, a community will need to identify industries that it wants to encourage. In setting priorities, environmental impacts, as well as labor market and other impacts should be considered. This planning process requires summary measures of environmental consequences that can be compared across industries. The detailed technical information used in

administering the environmental management programs should be processed and reduced to a few indicators of the most important environmental impacts. Appropriately compiled information apparently does not currently exist. Although development of this information is beyond the scope of this article, we can make some suggestions about developing it.

First, the most important aspects of water and air quality must be identified. The list of parameters must be long enough to permit consideration of the complexities of industrial impacts on the natural environment, but short enough to permit the public to comprehend the trade-offs involved. In putting together *North Carolina's Environment, 1981 Report*, a number of state agencies involved in environmental issues distilled a large volume of information about the state of the environment. The dimensions of water and air quality included in this report could provide the needed framework. Water quality was rated on the dimensions oxygen demanding wastes, bacteria, sediment, nutrients, and toxics, and air quality was rated on carbon monoxide, ozone, particulates, lead, sulfur dioxide, and nitrogen dioxide.

Secondly, existing information about these important dimensions of industrial environmental impacts must be compiled for Standard Industrial Classification categories. There are two major sources for this information. First, the federal Environmental Protection Agency, in such publications series as *Development Documents for Effluent Guidelines and Standards* and *Compilations of Air Pollutant Emission Factors*, reports the results of nationwide surveys of industrial wastes and pollution control practices.

To be useful for economic development planning, information on the important dimensions of interest must be extracted and reclassified according to the SIC code. Secondly, in the course of carrying out their permitting and monitoring responsibilities, state agencies collect a great deal of information on environmental performance of North Carolina firms. In the case of water and air quality files kept by the Department of Natural Resources and Community Development, permit applications and monitoring reports are filed by county and company name. No compilation of this material is presently available. The Department of Human Resources conducts an annual survey of hazardous waste generation, storage, treatment, and disposal. The results of this survey are computerized. The generation of reports by industry could be accomplished easily if the SIC code were added as a data item for each firm.

environmental considerations monitored

In administering regulatory programs and planning environmentally responsible development, government actions seek to control the generation of industrial wastes. Local governments are directly involved in disposing of the wastes that are generated. In order to plan for municipal wastewater treatment and solid waste disposal services, planners need to estimate the volume of wastes that will be produced by a new industrial facility.

Table 5

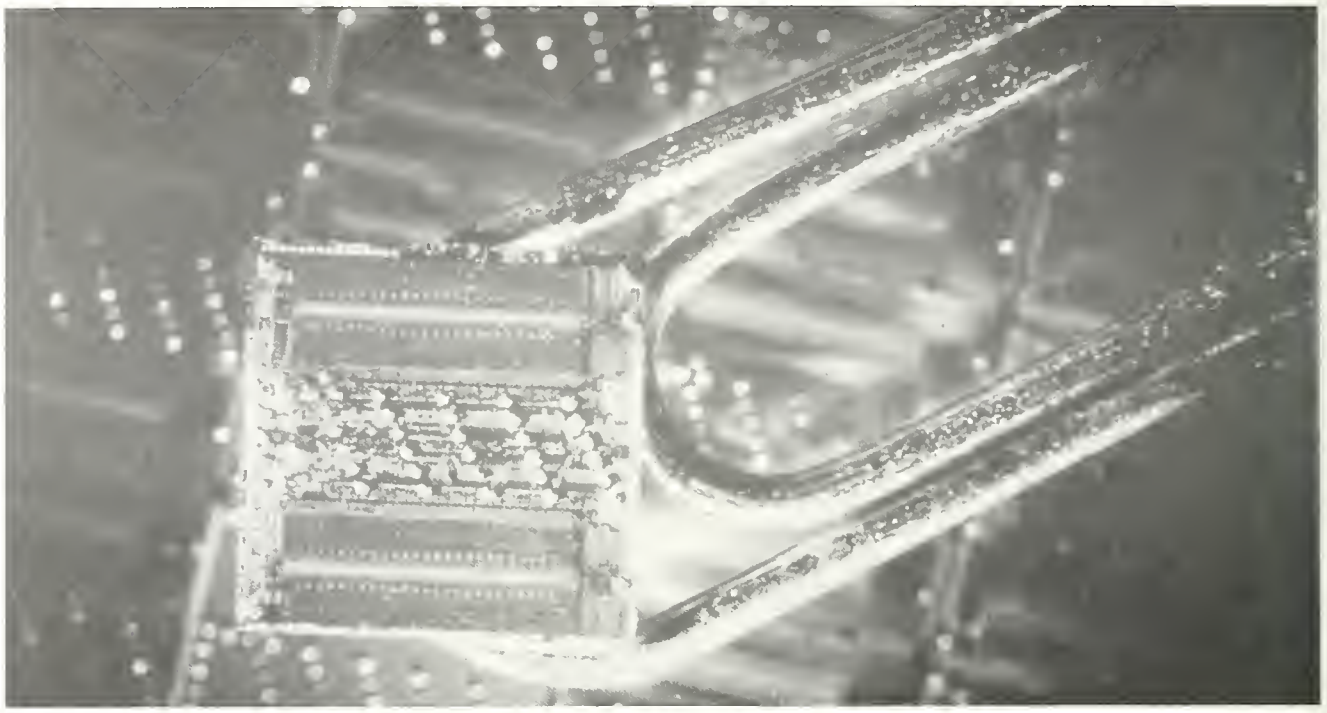
Generation of Industrial Wastes by Selected Industries

Industry	Wastes/Employee* Pounds/Day	Discharge/Emplolyee** Gallons/Day
Meat Products (201)	28.47	8.67
Beverages (208)	1.46	29.65
Knitting Mills (225)	0.36	8.19
Yarn & Thread (228)	0.44	8.53
Men & Boys' Furnishings (232)	0.18	INA
Household Furniture (251)	2.15	INA
Plastics & Synthetics (282)	1.56	202.93
Drugs (283)	0.96	97.30
Industrial Organic Chemicals (286)	INA	704.16
Hose & Tubing (304)	INA	150.46
Misc. Plastics (307)	1.73	10.66
Nonferrous Rolling & Drawing (335)	0.82	35.15
Fabricated Structural Metals (344)	0.82	4.32
Construction Machinery (353)	1.02	9.61
Metalworking Machinery (354)	1.04	5.64
Office & Computing Machinery (357)	0.26	28.97
General Industrial Machinery (356)	0.80	4.49
Electrical Industrial Apparatus (362)	0.81	8.85
Household Appliances (363)	0.66	17.93
Communication Equipment (366)	0.50	5.82
Electronic Components (367)	0.57	6.56
Motor Vehicles (371)	1.21	17.88
Engineeing & Scientific Instruments (381)	0.29	20.24
Measuring & Controlling Devices (382)	0.40	8.81
Medical Instruments & Supplies (384)	0.54	8.94

**Source: Steiker (1973) — based on 300 production days

**Source: U.S. Bureau of the Census *1977 Census of Manufacturers* — based on 300 production days.

The survey of water use included in the *Census of Manufacturers* includes data on discharges. Discharge per employee coefficients have been calculated from this information (Table 5). Total water discharged is closely related to water intake, since most industrial processes actually consume little water. The amount of water discharged is not, however, an adequate indicator of the need for wastewater treatment. How much of this water will be discharged into *municipal* wastewater systems is



Chip on a clip

an important consideration. The 1977 *Census of Manufacturers* data for North Carolina indicates that only 25% of industrial wastewater was discharged into public sewers. However, in a recent survey of new plants' experiences with environmental regulations (Hekman et al., 1983) all the larger firms reported applying for permits to hook up to municipal sewerage systems.

Future production of all solid wastes in local areas usually has been projected on the basis of a per capita waste generation coefficient. Industrial, commercial, and residential wastes are projected together on the basis of a single multiplier. The accuracy of projection of solid waste generation could probably be significantly improved by projecting industrial wastes separately on the basis of coefficients such as those found in Table 5. If agricultural and mining wastes are excluded from consideration, industry accounts for 25-30% of all solid wastes. (Greenberg *et al.*, 1979).

solid waste projections

The solid waste coefficients in Table 5 were developed from a special survey conducted by Steiker (1973) in the Philadelphia area over ten years ago. The correct values for North Carolina in the 1980's would depend more on technological changes during this time than on locational differences for a given industry.

In assessing the implications of industrial development for the community's waste disposal facilities, the type of chemicals present in the wastes must be considered. The type of wastewater treatment required will depend on pollutants present. The local government may require the industry to pretreat the water to remove chemicals that cannot be handled by its routine treatment procedures. Of particular concern in the disposal of solid wastes is the presence of hazardous wastes. EPA studies report that 10% of the solid waste produced by industry is hazardous (Greenberg, 1979). Stricter controls on air and water pollution often result in increased generation of solid wastes. Information on the composition of wastes can be obtained from EPA reports, from information collected by environmental management agencies in permitting and monitoring, and from the industry.

Conclusion. This article has reviewed many of the most important types of community impacts of industrial development. We have identified data sources and some simple analytical techniques for estimating impacts, and provided an indication of the degree of variation of impacts among different emerging industries.

It is clear that the emerging manufacturing industries in the Southeast offer a potential boost to communities which have experienced some economic and fiscal distress during a period when traditional industries have declined. Yet our evidence indicates that one cannot lump together the emerging, or high tech industries in terms of their prospective impacts. Indeed there are some potentially serious negative impacts associated with new industrial development which should be *carefully*

assessed. The high rate of change in production technology in the emerging industries makes this type of careful assessment often difficult, but just as important if local communities are to be well-served by industrial development.□

This article is adapted from a report written for the North Carolina Board of Science and Technology and the North Carolina Department of Natural Resources and Community Development in 1983. That report was co-authored by Rebecca Winders, a PhD candidate at the Department of City and Regional Planning, UNC-Chapel Hill. The author wishes to acknowledge her valuable research assistance.

NOTES

1. Indirect impacts such as economic multiplier effects are not considered here, nor are fiscal impacts of industrial development. These types of impacts should be considered by local officials when choosing local economic development strategies or making decisions about particular industrial projects.
2. Insured employment covers approximately 96% of non-agricultural wage and salary employment. Virtually all employees in manufacturing industries are included.
3. Wages, but not employment, of all the different persons on the payroll are reflective and the 52 week basis is inaccurate to the extent that workers are not employed the whole year or plants are idle for part of the year.
4. This data from the Annual Survey of Manufacturers reflects energy use nationwide. Information on energy consumption for North Carolina industries is also available in the Annual Survey but since the appropriate statistics for employment are not given for the State, valid State ratios could not be computed.
5. See the *North Carolina Environmental Permit Directory*, published by NCRD's Office of Regulatory Relations for descriptions of 28 permit programs and a listing of the government agencies that administer them.

References

Breazeale, William and Scott, John G. 1981. "Planning for the Boom at the Local Level," *N.C. Insight* Vol. 4, N. 3, pp. 39-43.

Greenberg, Michael R. et al 1979. *A Primer on Industrial Environmental Impact*. Rutgers University, Center for Urban Policy Research. New Brunswick, N.J.

Hekman, John S. *et al.* 1982. *Impact of Environmental Regulation on Industrial Development in North Carolina*. Chapel Hill: Center for Urban and Regional Studies, University of North Carolina.

IDE Associates 1971. *Estimating Land and Floor Area Implicit in Employment Projections*. Philadelphia.

Kinnard, William N., Jr., Messner, Stephen D. and Boyce, Bryl N. 1979. *Industrial Real Estate*, 3rd ed. Washington, D.C.: Society of Industrial Realtors.

Lauria, Donald T. and Chiang, Cheng H. 1975. *Models for Municipal and Industrial Water Demand Forecasting in North Carolina*. Water Resources Research Institute of the University of North Carolina.

Martes, Harold 1971. *Projection of Highway Utility*. Washington, D.C.: Highway Research Board, National Research Council.

North Carolina Department of Labor 1981. *Occupational Injuries and Illnesses, 1979*.

North Carolina Department of Natural Resources and Community Development 1981. *North Carolina's Environment, 1981 Report*.

North Carolina Employment Security Commission *Annual Planning Reports*. Raleigh, N.C.

North Carolina Employment Security Commission, Bureau of Employment Security Research 1980. *North Carolina Insured Employment and Wage Payments 1980: Experience Rating*. Raleigh, N.C.

North Carolina Employment Security Commission 1982: State Labor Summary, June. Raleigh, N.C.

North Carolina Employment Security Commission *Wage Rates in Selected Occupations* (annual). Raleigh, N.C.

Stanco, Maria 1981. "Water Use in the Microelectronics Industry." Working Paper No. 2 in D. Whittington, ed., *Planning for the Microelectronics Industry in North Carolina*. A report to the N.C. Department of Natural Resources and Community Development.

Steiker, Gene 1973. *Solid Waste Generation Coefficients: Manufacturing Sectors*. Philadelphia: Regional Science Research Institute.

Stein, James I. 1982. "The North Carolina Microelectronics Industry: Consequences for Local Labor Markets and Implications for Job Training," Department of City and Regional Planning, University of North Carolina.

U.S. Bureau of Labor Statistics. *Area Wage Surveys*. Washington, D.C.

U.S. Bureau of Labor Statistics *Employment and Earnings (monthly)*.

U.S. Bureau of Labor Statistics 1977. Industry Wage Survey: Semiconductors. Washington, D.C.

U.S. Department of Commerce, Bureau of the Census 1977. *Census of Manufacturers*.

U.S. Department of Commerce 1980. U.S. Industrial Outlook. Washington, D.C.

U.S. Department of Labor 1981. Selected Characteristics of Occupations in the Dictionary of Occupational Titles. Washington, D.C.

U.S. Environmental Protection Agency *Compilations of Air Pollutant Emission Factors*.

U.S. Environmental Protection Agency Development Documents for Effluent Guidelines and Standards.

Urban Land Institute 1975. Industrial Development Handbook. Washington, D.C.

Will Others Jump on the Rouse Bandwagon This Time?

Stacey Ponticello Norman Acker

This article focuses on the Enterprise Foundation, a unique organization dedicated to the expansion of the low-income housing supply in central cities. Its uniqueness lies primarily in its private sector "roots." The author examines the Foundation's goals, organizational structure, and methods of operations. Included in this discussion is also an inset explaining the interaction between the Enterprise Foundation (EF) and the Enterprise Development Corporation (EDC), a private development corporation. In addition, this section provides an analysis of the financial and legal structure of a successful EDC project in Norfolk, Virginia.

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more than just housing

The entry of private sector actors into the domain of urban revitalization is not a new phenomenon. For the past ten years, the public and private sectors have joined forces in redeveloping the central cities of many large metropolitan areas. Private sector participation, however, has been conditional. That is, it has been confined to profit making ventures, which tend to be large-scale commercial projects. Low-income housing efforts, on the other hand, have been initiated primarily from within the public sector arena.

One noticeable exception is the Enterprise Foundation, a non-profit foundation funded by its profit-making subsidiary, the Enterprise Development Corporation. These two organizations are the creation of James Rouse, innovative developer, trendsetter and founder of the Rouse Company. The Foundation's objective is to lend financial and construction assistance to urban neighborhood groups throughout the country.

The creation of the Enterprise Foundation is important for a number of reasons. First, it reflects a trend of private sector involvement in low-income housing and secondly, it uses innovative approaches to finance and organize neighborhood efforts. From both the perspective of planners and Enterprise staff members, the Foundation's most impressive feature is its creation of a successful model for improving and expanding the housing stock for the poor and providing essential human services and employment training in low-income urban neighborhoods.

Financing the Foundation

In 1982 the Enterprise Foundation was established with a million-dollar contribution from James Rouse and a million-dollar grant from the Atlantic Richfield Corporation. Although the starting budget was meager relative to the sizeable tasks on its agenda, the Foundation was formed with an extensive and creative financing scheme in mind.

At the same time that the Enterprise Foundation was created, Rouse established the Enterprise Development Corporation, a profit-making real estate development firm owned by the Foundation. This corporation was designed to eventually finance the Foundation and make the Enterprise Foundation a self-sufficient unit. Until the Development Corporation's profit margin was large enough to accommodate the financial needs of the Foundation, Rouse intended to solicit financial commitments from corporations and private individuals.

Thusfar, the Development Corporation has been unable to fully finance the Foundation, although it forecasts cash flows to the Foundation in excess of one million dollars annually by the late 1980s, with estimates of ten million dollars in the 1990s. The bulk of the Foundation's current source of funds is through grant money. Commitments supporting the Enterprise Foundation now total $17.4 million, toward a goal of $25 million.

Waterside

By developing smaller scale versions of the "Rousian" festival marketplaces, the Enterprise Development Company (EDC) hopes to accomplish the dual goal of providing an impetus for central city revitalization in medium sized cities while making money to support the Enterprise Foundation.

The biggest and most successful of EDC's projects to date is Waterside in Norfolk, Virginia. Waterside consists of 80,000 square feet of retail space which supports 115 specialty merchants and restauranteurs. It has a large open area next to the waterfront, a 6.5 acre city park, a marina, and a 625 space parking garage adjoining the marketplace. Food sales alone in June, 1983 were close to $2.3 million, and the project expects at least six million visitors a year, spending close to $25 million.

The legal and financial structure of the Waterside project is somewhat complex. At one level, the project is a "joint venture" between the City of Norfolk and Waterside Associates. Although this is a prime example of a "public-private partnership," the legal relationship is not a partnership at all. Rather, there are two independent parties bound together primarily by a lease, a loan contract and other miscellaneous agreements. The legal partnerships between Waterfront Enterprises (a subsidiary of Harvey Lindsay & Company) and Norfolk Marketplace, Inc. (a subsidiary of EDC). This partnership operates under the name of Waterside Association.

The City of Norfolk, through the Norfolk Redevelopment and Housing Authority and other agencies, provided a $9.8 million direct loan to Waterside Associates. Additionally, it arranged for a loan of up to $5.4 million from a consortium of banks to be channelled through the NRHA. The city also paid $2.34 million outright for site acquisition and demolition for the Waterside tract and the accompanying garage property, and $1.25 million to build the foundation for other related improvements to the area. All told, the city spent $33.23 million on all aspects of this project, $14 million of which was a loan at 12% interest.

Waterside Associates had no upfront investment except for time, expertise, overhead and other unaccounted development expenses. The partnership did have a contingent liability, however. If the project had cost more than $15.2 million to build, Waterside Associates would have had to "lend" the excess money to the project, and would only be paid back from project income after all operating expenses and debt service had been covered.

Although the city invested a great deal of money in this project, its potential rewards are great as well. If the project is successful, the city will receive an extra $25 million in taxes over 30 years. This tax increase will come from an increase in sales, food and beverage and property taxes. Additionally, the city will be paid back its $9.8 million loan at 12% interest, or about $1.2 million per year, and another $0.5 million to pay back the loan from the consortium. When the project achieves a positive cash flow, the city will also obtain 50% of the net cash flow (estimated to be $48 million over 30 years). In addition to these financial renumerations, the city has already obtained national press coverage (increasing its attractiveness for conventions and tourism), amenities for its residents, and impetus for other revitalization efforts in downtown Norfolk.

Waterside Associates, if the project is successful, will receive management fees for managing the project and $225,000 a year as an "incentive fee" for taking the development risk. If it had paid any excess costs these would be returned to it, and it will also earn an estimated $48 million over 30 years in net cash flow.

By combining the corporate structure with the fact that it had little direct financial investment in the project, EDC was able to achieve very limited liability. Not only is the Enterprise Foundation not liable for any failures on the part of EDC, but EDC itself formed a subsidiary to handle the Waterside project so that its other projects in other cities would not be jeopardized if Waterside failed.

EDC took advantage of the tax code by avoiding double taxation of corporate earnings and by passing some of the tax benefits on to Harvey Lindsay and Company through the limited partnership. The first of these tax advantages came from the fact that although EDC is a taxable corporation, the dividends it pays to the Enterprise Foundation are not taxed, since the Foundation is a non-taxable entity. The second tax advantage comes from the fact that real estate development often has taxable losses associated with it in the initial years. These losses can be attractive tax shelters if one has other income which needs a shelter, which may be one reason EDC entered into a partnership with Harvey Lindsay and Company, in order to pass some of the tax advantages along to them in exchange for valuable consideration.

The Philosophy Behind the Enterprise Model of Revitalization

The primary goal of the Enterprise Foundation, as stated in its 1984 Annual Report, is "to help the very poor help themselves to decent, livable housing, and out of poverty and dependence into self-sufficiency". It plans to accomplish this goal by building a national network of non-profit neighborhood groups. The Enterprise Foundation is not interested in simply performing the paternalistic task of allocating funds to the neighborhood groups it deems worthy. Instead, it views its role as "partner" to these local groups.

In 1985 the Foundation expanded the Enterprise Network to 27 groups in 15 cities. The Network now includes: Oakland, California; Denver, Colorado; Chicago, Illinois; Omaha, Nebraska; Detroit, Michigan; Cleveland, Ohio; Pittsburgh, Pennsylvania; Philadelphia, Pennsylvania; Baltimore, Maryland; Lynchburg, Virginia; Dallas, Texas; Nor-

localized approach

Before - - -

folk, Virginia; Wilmington, Delaware; Boston, Massachusetts; and Washington, D.C. The Enterprise Foundation employs a staff of field officers who are each assigned to four cities. This organizational policy allows each officer to develop a rapport with neighborhood group members and to procure an understanding of the special problems and constraints of a particular locality.

neighborhood group involvement

The partnership approach of the field officers toward the neighborhood groups is especially important in light of the Enterprise Foundation's strong belief in helping these groups help themselves. In an interview, Enterprise Foundation President, Ed Quinn, stated that he believed many public housing efforts had failed primarily because of a lack of community input. Without community involvement, there can be no sense of responsibility for, or commitment toward, maintaining the improvements made by a neighborhood group. This kind of detachment from housing projects inevitably leads to failure, regardless of who initiates the project.

The Enterprise Foundation's commitment to neighborhood involvement and its partnership-style relationship with neighborhood groups is reflected in one of the Enterprise's primary objectives: "to use the effective work of neighborhood groups in providing human services for the very poor." The importance of neighborhood involvement in the Enterprise revitalization process can be seen even more clearly in its criteria for neighborhood group selection into the Enterprise Network.

The neighborhood groups must meet the following requirements: maintain a strong neighborhood base; work with the very poor; involve residents in the housing development process; use volunteers; raise funds from their own commitments; assist residents in the management and maintenance of their properties; provide services such as job training and placement, health services, child care, early education, and recreation; receive institutional backing from a stable organization in the community; and seek to prevent displacement.

In addition to the criteria requiring organizations to demonstrate their level of community participation, the Enterprise Foundation believes that it is also important for these neighborhood groups to be involved in providing a variety of human services, in addition to housing. Although assistance from the Enterprise Foundation is mainly directed toward housing, Foundation officials believe that the absence of a comprehensive approach to urban revitalization decreases a housing project's chance for success. To this end, the Enterprise Foundation established job placement centers in four cities last year – Oakland, Chicago, Detroit and Philadelphia. The original placement center, which is located in Washington, D.C., Jubilee Jobs, placed 558 unemployed people last year.

The Enterprise Mission

The Enterprise Foundation perceives the two biggest road blocks to providing decent, affordable housing for low income households as (1) the cost of construction and (2) the cost of financing.

Several methods of reducing the cost of financing have been developed during the past two years. All of them involve the Enterprise Social Investment Corporation (ESIC), a for-profit subsidiary of the

Enterprise Foundation. ESIC's main function is to raise funds for the Foundation. Some of its fund-raising activities include the following:

(1) the equity syndications of properties owned by non-profit neighborhood groups. The equity interests of these non-income-producing properties are sold to individuals interested in tax shelters. Under this syndicated form of ownership, ESIC often acts as co-general partner in conjunction with the neighborhood group, and equity investors maintain a limited partner status. The general partners retain full control of the properties and bear full liability for the project. The limited partners receive any of the tax savings generated by these properties.

(2) the development of financial packages which maximize the use of available public and private funds. Most finished packages include Enterprise grants, Housing and Urban Development (HUD) grants, syndications, corporate donations, and commercial bank loans.

(3) the recent initiation of a campaign encouraging investors to lend loans at low interest rates. This effort helps ESIC establish a reliable, predictable source of very low-interest loans for neighborhood groups, enabling them to acquire and rehabilitate property. These groups often acquire tax delinquent or abandoned housing as well as housing held by the city for sale at a public auction.

Obtaining commercial bank loans usually requires some negotiation on the part of Enterprise officials, but Enterprise Foundation field officers are often successful in eliciting creative financing suggestions from bank officials. For example, in Lynchburg, Virginia, the Enterprise Foundation deposited $180,000 in the United Virginia Bank at 6% interest as collateral for a loan to be issued to a neighborhood group. With this type of credit enhancement, the bank granted 100% financing for 20 new homes.

To address the problem of high construction fees faced by many neighborhood groups, the Enterprise Foundation organized the Rehabilitation Work Group (RWG) charged with finding ways of reducing the construction costs of rehabilitation. The RWG consists of ten members who have substantial experience in housing construction. In 1983, the RWG staff studied the cost-saving construction techniques of a group in New York City. This group organized tenants to restore badly deteriorated buildings that the City had seized for tax delinquency. With sweat equity and small grants from the city, this New York group made units fit and liveable at costs as low as $2500 per unit.

Other RWG activites include: (1) preparing guidelines for acceptable livability standards that avoid costly structural changes, inappropriate for low-cost rehabilitation; (2) assisting neighborhood groups through cost evaluations prior to purchase; (3) negotiating bids with small contractors that permit the use of volunteer laborers and neighborhood construction crews when possible; and (4) helping neighborhood groups draft rehabilitation plans and specifications which allow these groups to act as their own general contractors.

innovative construction approaches

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After – – – Jubilee Housing in Oakland, CA

Urban Harvest

Tracy Hood

To the professional planner, the proposal of a community gardening project as a community development initiative may sound simplistic in this era of complexly structured public-private urban development ventures. Yet, this article cautions against such an attitude. Author Tracy Hood reminds planning and other city officials of the value of such small-scale, less costly community development options as community gardens. She lists and describes the many economic, educational and social benefits to be realized from planting and maintaining a garden.

Tracy Hood received a Bachelor of Arts Degree in Environmental Studies from Brown University in 1985. She is interested in organic agricultural techniques, and is currently working on a farm in West Rockport, Maine.

Over the past six years Providence, Rhode Island and its environs have witnessed the growth of more than twelve community gardens. The locations and populations they serve are certainly diverse, but their goals seem comparable in most cases: to provide low income, often minority and unemployed city dwellers with (1) a means of obtaining fresh, pure vegetable produce at low cost (i.e., usually in return for labor and a seasonal plot fee); (2) an effective use of vacant lots; and (3) a means toward neighborhood unity and cooperation. It could be said that a similar "gardening fever" has spread to most major cities throughout the United States with some areas reporting spectacular success.

Why are these urban gardening efforts working so well? Three important reasons are readily identifiable. First of all, there seem to be relatively few *insurmountable* obstacles blocking the development of community garden projects. Secondly, most cities do not take advantage of their food-growing potential, and they are beginning to realize it. Thirdly, community gardens do not pollute, they do not threaten; they simply provide a degree of seasonal employment and a decrease in food bills for committed participants — a seemingly ideal list of reasons for which one could be persuaded to undertake such a project.

achieving success

Ironically, responses to something as benevolent as a community garden are often unenthusiastic statements referring to their "dinosaur" status: "Community gardens? Oh, yeah — a real hit in the 70's. Certainly not priority policy for the 80's." Such responses were actually made (in some many words) by certain Providence policymakers. What is the basis of such sentiments, and what do they indicate about the likelihood for success of community gardens in Providence in 1985?

They are typical because community gardens are generally remembered as a creature of the 70's. By Earth Day, in May, 1970, an environmental movement had taken firm hold in the United States, and community gardens were a part of that environmental statement. A vegetable garden flourishing in the midst of an inner-city ghetto was living testament to a "small is beautiful" ideology. They were also symbolic of community self-reliance, people power, neighborhood co-operation, urban ecology, environmental education, and a type of sustainable agriculture (as long as the land was not slated to become housing stock in five years). Besides all of that, community gardens made plain economic sense. When approximately 600 square feet of land have the potential to yield fresh vegetables for a family of four for a year, they are difficult to argue against.

So why the reaction against community gardens as an outdated form of urban policy? All of the benefits that accrue from community gardens still exist with relatively the same costs. Part of the reason may well be that community gardens are

typically the response to a crisis situation. The Great Depression gave rise to the relief garden, typically a 50' x 100' plot producing the staple crops of beans and potatoes. In the 1940's, World War II prompted the United States Department of Agriculture to promote and support community gardens in cities, schoolyards, and urban outskirts; anywhere, in fact, where there was arable land. This venture was in earnest. By 1944, 20 million urban gardens grew 40% of the fresh vegetables consumed in the U.S. In both cases, the need for food was pressing and the city garden gave people a direct means of "helping out", increasing their sense of control in otherwise chaotic times. Likewise, in the mid 70's, with the Oil Embargo and its companion inflation, combined with the environmental movement's attention to chemical additives in processed foods, city folks turned again to community gardens as a means toward regaining a sense of control in their lives, as well as cutting costs on the weekly food bill.

The 70's Energy Crisis, however, has played itself out. The 80's have witnessed a decrease in inflation and, according to experts, a general upsurge in the economy is a reality. Being without food, then, is for most not a pressing issue. But here the key word is *most*. According to the recently published study presented by the Harvard School for Public Policy, there are still approximately 20 million people who *do* face a food crisis. In Providence the number of people on food stamps is estimated to be 26,000; the unemployment rate for Providence is 5.4%. These figures cut across racial and ethnic lines, but they certainly are weighted against the Providence minority and refugee populations. At the very least, most of these people could potentially benefit from growing their own food. This is the first and most important reason why Providence policymakers should take the community garden issue seriously. There are other reasons as well.

Birth of a garden Read P. Brugger

How Do They Work?

First of all, the urban community garden does not usually require a large, sustained capital investment. The typical vacant lot will require clearing of trash, plowing, some type of soil conditioning, a fence and, if possible, a water system. Once the initial property investment is made, however, the financial burden subsides considerably. Those who maintain the garden are the gardeners themselves, working not for a wage but to reap, literally, the fruits of their labor. A municipality, then, typically has little or no maintenance responsibility once a community garden has been established. (They can be supportive in other ways, however, particularly through politically symbolic gestures.)

Continuing along an economic line of reasoning, the community garden can make a significant dent in gardeners' food bills. In 1984, an annual national survey published by Gardens For All reported that the 1.3 million acres of American gardens were producing 13.5 million pounds of vegetables with a total dollar value of $12 billion. At a local level, this means that on approximately 440 square feet of land the average family of four could realize a $324 savings on their food bill. The available land in lower South Providence alone (defined in terms of vacant lots) is approximately 2,146,969 square feet. Is it impossible to imagine South Providence residents growing their own food, *in the city*, at an estimated savings of $1,580,796 per year?

food cost savings

The economic ramifications do not stop with the gardener's weekly grocery bill. A report by the Tufts University Department of Urban and Environmental Policy, *A Land Resource Opportunity: the Reuse of Vacant Lots in Boston*, cites numerous studies which suggest that "open spaces" in urban areas increase the value of properties within a certain distance from such a space:

diverse benefits

> A study of a small urban park in a residential area of Lubbock, Texas (Kitchen and Hendon, 1967) showed that land values declined with distance from the park within a two and one-half block zone of influence. . . A later study (Lyon, 1972) found that increased property values due to close proximity to parks could be felt as far as one-half mile away from the site. Another study (Hammer, Coughlin, and Horn, 1974) includes information suggesting that the presence of Pennypack Park in Philadelphia accounted for 33% of the land value at 40', 9% at 1000', and 4.2% at 2500'.

Naturally, a small-scale community garden would not necessarily have the degree of effect of a Pennypack Park, but there would certainly be a perceived increase of the value of surrounding properties, even if merely from an aesthetic point of view.

Policy Justifications

economic questions

A city might argue that the lands used for community gardens, typically managed by not-for-profit neighborhood organizations, would have the effect of decreasing municipal tax revenue because of the exempt status of such organizations. Another look at the Tufts study reveals, however, that ". . . the maintenance costs for. . . community gardens. . . are less than the cost of necessary municipal services for developed land, (and) the rise in costs of public service provisions is greater than the rise in property tax income from developments." Thus, the probable increase in property values *surrounding a* community garden combined with the savings from municipal service costs should offset any revenues lost from land being removed from the tax rolls.

source of unity

Economically, then, a community garden provides benefits not only for those directly involved, but also for the neighborhood and the city as a whole. Ideally these benefits are sustainable through changes in policy approaches of successive political administrations simply because they are small-scale, neighborhood run, largely volunteer efforts that do not demand a high degree of direct municipal support once they have become operative.

Although persuasive, the economic justification for community gardens is too limiting. In fact, there are other, less tangible benefits that contribute to their justification as valid urban policy. The typical city-dweller spends most of her time walking and living in a confined, crowded atmosphere. There is no denying that such a living arrangement can cause a frenetic life-pace that makes city living undesirable. That same frenetic atomosphere, however, combined with air and noise pollution, also causes highly stressful conditions for city-dwellers. There is seldom anywhere to turn for quiet, open space free from traffic jams, honking horns, and crowds. If the need for such space were unfounded it would be difficult to justify the likes of Central Park in New York City or the Common in Boston. Turn of the century urban landscape designers — men like Frederick Law Olmsted and members of the American Park and Outdoor Art Association — were acutely aware of the need for green-space *within* city limits. It is not the same knowing that fresh air and solitude can be found forty minutes away. Many city-dwellers have neither the time, the transportation, nor the inclination to travel to find such space. The space needs to be *in* the city — accessible to all — a vivid, daily reminder of the natural order that exists beyond the highly contrived atmosphere of a city.

The point here is not to raze portions of a city and replace it with elegant parks and fountains. Rather, it is to suggest that cities devote some of their open space for gardening use. This open-space can take the form of small, 5000 to 10,000 square foot lots, dotted with raised bed vegetable gardens, fruit trees, a children's play area and a few benches for resting, chatting and picnicking. When the scale is thus reduced, there is an additional advantage: the participant of a small, urban community garden has, in a sense, a "piece of earth" to call her own, with the concurrent responsibility of nurturing it to ensure its survival. Central Park undoubtedly serves its purpose, but it could never fulfill the personal function of a small-scale gardening project.

If successful, the community garden will be a daily testament to a cohesive, co-operating neighborhood. To get a group of people to work and live harmoniously, it is probably best that they work together toward a defined, achievable end. If that end is in all of their best interests, it is not likely that an individual or a particular sub-group within the

Fall Harvest Julie Stone

neighborhood will have a need to disrupt the system. More specifically, the successful community garden needs to be an experience in the sharing of resources as well as skills. The Laotian refugee, raised in a rural setting, is an ideal instructor to the Afro-American who has lived in Providence all of her life. The community garden can thus help break down racial barriers that exist within a neighborhood. It is not, unfortunately, the end-all solution to racial tensions. If the logistics of the garden space are not well thought out, there is the possibility that more tension could be created than originally existed! If the gardens are closer to one sub-culture than another, for example, or if the organization that runs the program responds predominantly to one group over another, the possibility of vandalism is greatly increased. As with any urban development project, the community garden requires careful analysis and implementation if it is to be as effective as possible.

Moreover, although it is convenient to assume that rurally raised immigrants can fulfill the role of teacher toward the "city-folks," it is quite another matter that such an arrangement would actually result. It is likely that the immigrant speaks little or no English, Portuguese or Spanish, or whatever the predominant language of a particular neighborhood. Here the strength and capacities of the managing organization come into play. For, hopefully, such an organization will either have the capacity to get the assistance of translators, or they will at least know who they could turn to to get such information.

neighborhood group involvement

Other Benefits

The community garden, justified economically and socially, could also be a valuable educational tool. What better way to study the ecology of natural systems than to observe them in one's own backyard. *Education* does not just mean biology or soil science. A garden, when organic techniques are used, represents a system of inputs and outputs that creates a "closed" and a continuous cycle. The circle goes something like this: neighborhood food scraps are collected and composted serving as a consistent and reliable supply of organic matter to add

Inner city garden

Hansi Durlach

to the soil at regular intervals. As the garden season progresses, the inputs of seed and labor result in fresh produce to be harvested, eaten and eventually, in some form, to end back in the compost pile to contribute to next year's season. Excess harvest can be distributed to non-participants in the neighborhood or to the needy in another neighborhood, however the group chooses to arrange it. Some gardening groups have gone so far as to set up community canning and freezing centers. In this way, the urban gardener is imitating a traditional farming ethic of utilizing oversupply in the short-term to prepare for "hard times" over the long run. The community garden is thus a living laboratory in which people, of any age, can learn principles of ecology, biology, recycling, geology, and plant physiology at whatever level is suitable. In all likelihood the neighborhood garden will first be a demonstration of co-operative effort rather than a place for highly academic pursuit! (A garden started by a local high school, on the other hand, could easily be structured in such a way as to encourage a more formal learning situation.)

City Gardens

A fourth, valuable result of any community gardening effort is the improved nutritional value of the food that is grown compared to the "store-bought" equivalent. Numerous studies indicate that home grown food has a much greater chance of re-

taining a higher nutritional value simply because it spends less time traveling from ground to table. Further, certain processing and packaging methods cause foods to lose a variety of vitamins and minerals. According to *The Edible City*, "Because of (long-distance transport), fruits and vegetables must be picked before their natural maturing time, before the nutrients have had a chance for maximum nutrition and flavor development. Another detrimental effect...is that produce begins losing nutrients when picked. For example, corn will lose 50% of its sugar within 24 hours at 75 degrees Farenheit."

The warning light that flashes in most people's minds at this point, however, is the problem of lead in city gardens. The fact that lead accumulates in urban grown fruits and vegetables is undeniable. This problem, therefore, must be confronted and its ramifications must be understood in order to avoid the possibility of health-threatening lead contamination, particularly for children under the age of six (the highest risk group). The latest reports indicate that lead, besides contaminating the exposed surfaces of plants, is also absorbed through their root systems. What has been discovered, however, is that leafy vegetables and root crops have the highest concentrations of lead, whereas fruiting plants store lead mostly in their leaves, leaving the fruit relatively pure.

Such facts do not mean, however, that the urban garden is doomed, but rather that certain procedures should be carefully carried out to reduce, to the greatest extent possible, the hazards associated with lead contamination. The seven "good gardening practices" advocated by Boston Urban Gardeners, Inc. are: (1) Locate gardens away from roads if possible, and lay out gardens to keep leafy greens and other hard-to-wash vegetables as far from the street as possible. Planting a protective hedge "street-side" is also helpful. (2) Discard older, outer leaves of vegetables before eating. (3) Add lime to soil to bring pH up to as close to 6.5 to 7.0 as possible. It has been suggested that when soil has low levels of lead, a neutral pH may help inhibit lead uptake by the plant. (4) Add organic material as often as possible. (5) Use mulch...Mulches will help keep airborne lead off the soil surface so that it can't wash down into the soil where it could be taken up by the plant. (6) Peel all root crops to remove lead that may have concentrated in the peel. (7) Grow vegetables in containers in clean topsoil if the lead level in the soil is extremely high.

While the food is likely to be "healthier" when fresh-picked out of the community garden, so are those who do the picking. Particularly for the aged, gardening provides a certain amount of physical, outdoor activity that many people may be lacking in their daily routine. Actually readying an abandoned lot might even require a modicum of heavy physical labor which could attract the neighborhood youth's attention, and perhaps even continued interest and participation.

Benefits of Community Gardening

Finally, the community garden offers a means through which a group of often powerless people can regain a sense of control over their own environment, in a very real, hands-on sense. They have the opportunity to help formulate the overall plan; to assist with the physical renovation of the property; to be responsible for their own plot or for a section of a co-operative plot; to participate as a part of a group on common work days; and to celebrate the seasons at Spring Clearing and Fall Harvest.

awareness of problems

The community garden is a humble, small-scale approach to an over-whelming urban dilemma. But its small size, flexibility and lengthy list of benefits makes it an ideal project for any city to support. *A City Gardener's Guide: Growing, Surviving and Reaping the Fruits of Our Labor*, a publication of the Boston Urban Gardeners, succinctly states the concepts behind the community garden.

safety tips

> Urban agriculture is more than a pleasant pasttime for a good interim use of vacant land...(It) is a serious (but joyful) challenge to the common view of what city life must be like. It is also a demonstration that we do not have to be helpless in the face of uncontrolled prices or basic necessities or continual degradation our our basic environment. Urban agriculture is land reclamation; it is revegetation, it is food and fiber production, it is community development in the most basic sense. Perhaps most important we see in community gardens the seeds of community control of resources and of the quality of city life. □

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The Foundation's Role as Model

"How many more U.S. cities and neighborhood groups is the Enterprise Foundation capable of assisting?" was a question posed to Ed Quinn during an interview conducted for this article. He explained that the Foundation would continue to expand, but that, of course, the scope of the problem is too large for any single organization or foundation to handle. The Enterprise Foundation is striving to produce a successful revitalization model for others to follow as well.

is there a limit?

The Enterprise Foundation model offers methods for financing and implementing low-income housing revitalization projects. With a successful model available, it is more likely that benefactors from both the private and public sectors will become involved in the revitalization procress.

It would be naive to think that all private sector benefactors would choose to undertake "Rousian-scaled" human services projects since most entrepreneurs, by definition, are self-motivated individuals interested in maximizing profit. Rouse's motivation for working with the poor stems primarily from his religious convictions and therefore might be unique. On a more optimistic note, it is conceivable that the existence of this model might encourage some large-scale developers to dedicate staff time to local non-profit groups for such business-related reasons as public and community relations. It may still induce some other technically-oriented professionals, with an interest in social issues, to provide pro bono assistance. Finally, having completed many projects, neighborhood groups are able to approach benefactors with specific requests that include a time frame. Professionals are more apt to respond to such time-specific requests.

the model's purpose

In sum, the Enterprise Foundation should be credited for its creation of a model to guide the efforts of private individuals, local firms, corporations, and government agencies interested in participating in the urban housing revitalization process. It must also be acknowledged as a unique and very worthwhile social institution by itself. By virtue of its name and association with James Rouse, the Foundation has already aided and legitimized many hard-working neighborhood groups, and its continued prosperity will help secure these tenuous, but much-needed human service organizations in the future. □

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older areas a sense of opportunity that is best expressed by the idea of a "service rich neighborhood."

The resources, the women and men and their homes are there. The viability of home-based services has been proven by children's day care and their potential for growth suggested by the bed and breakfast movement. The growth of "systems" is showing the way to overcome many of the problems of home-based services, including quality control. The variety of home-based services has already been indicated by individual examples in many parts of the country. The challenge is whether or not land use planners and others can broker the release of people and housing as service providers, and on what scale, for what variety of services. At this point, it appears that a large part of that brokering will focus initially on the growth of systems of home-based providers. Those systems will offer many older women the opportunity for career growth building on their existing base of caregiver skills. The use of systems for satelliting will also offer social service providers an opportunity for expansion during a time of cutbacks. □

NOTES

1. *The Montgomery Journal*, April 6, 1983.

REFERENCES

Newsday, Monday, March 14, 1984.

Bryant and Russell, "A Portrait of the American Worker," *American Demographics*, March, 1984.

U.S. Bureau of the Census, "An Aging Society," *Current Population Reports Special Studies Series*, p. 23, No. 128, 1983.

The Montgomery Journal, April 6, 1983.

Brant Robey, ed., "On Demographics," *American Demographics*, Vol. 6, No. 4, p. 11, April 1984.

NBC News, "Women, Work and Babies," with Jane Pauley, March 16, 1985.

Applied Management Sciences, "A Study of Needs and Resources for Child Day Care in Montgomery County," Sept. 1983.

M. Grant, Montgomery County Division of Family and Youth Services, personal conversation, February, 1983.

Conversation with Pat Wilson, March, 1984.

Conversations with Ruth Kuetmeyer and Katherine Hatle, Madison, Wisconsin, October 16, 1984.

Special Report, *Report on Pre-school Programs*, January 22, 1985.

Host Kit, American Bed and Breakfast Association, p. 6, 1984.

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Planning Considerations: Other limits that the courts have placed on development fees include that they be based on reasonable planning documents and studies and that there be adequate provision for those who pay the fee to challenge the criteria upon which the fee is based. In *City of Fayetteville* the court ruled that the city's park fee was not based on a sufficiently definite plan for parks to justify the imposition and the amount of the fee. The court pointed to the need for "reasonably definite" plans for spending the fee and for refunding the fee if areas do not develop as expected. This points to the need for coordinating fees with comprehensive plans and capital facility plans in determining both the level and expenditure of the fee. Since development fees adopted under police powers are regulations rather than taxes, there must be sufficient room to take account of special situations. Julian Juergensmeyer, a noted land use attorney at the University of Florida, has stated this very effectively by noting that:

> In place of a rigid and inflexible formula for calculating the amount of the fee to be imposed on a particular development, a variance procedure should be included, so that the local government may consider studies and data submitted by the developer to decrease his assessment.[23]

In summary, the legal foundations for development fees are just evolving. There are many issues that the courts have to address, and it is likely that many of the current rules for determining the legality of fees will change as the courts begin to grapple with the more complex issues associated with them. The current rule used by most states in determining what can be financed with development fees is the rational nexus criterion. Under that criterion, cities can use fees to finance the pro-rata share of the costs of all infrastructure that benefits new development. This is a fairly liberal interpretation of police powers and allows cities to use development fees to address many of the fiscal problems associated with rapid growth. On the other hand, rational nexus allows cities to shift costs that should be considered a city-wide responsibility to the developers. Because of this evolving legal status, cities are advised to use a fair degree of discretion in deciding not only if they wish to use development fees, but for what type of facilities they may be used.

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NOTES

1. Rosewater, Victor, *Special Assessments — A Study in Municipal Finances,* Columbia College, New York (1898) pp. 90-91.
2. See Mandelker, Daniel, Dawn Clark Netsch, and Peter W. Salsich, Jr., *State and Local Covenants in a Federal System: Cases and Material,* 2nd ed., Michie Company, Charlottesville, Va. (1983) pp. 216-232.
3. *Norwood v. Baker,* 19 S.Ct. 187 (1898).
4. Oates, Walace E., "The Effects of Property Tax and Local Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis," *Journal of Political Economy,* Vol. 77, No. 6 (Nov/Dec 1969) pp 957-71.
5. Mandelker, Netsch, and Salsich (1983), p. 251.
6. See for example, Mandelker, et. al.
7. Sato, Sho, and Arvo Van Altryne *State and Local Government Law* 2nd ed. Little, Brown and Co., Boston: 1977.
8. *Alborneco v. Maden Irrigation District,* 53 Cal. 2d 735, 3 Cal Reporter, 343-350 2d (1963)
9. *Wright v. Profetti* 261 S.C. 68, 198 S.E. 2d 275 (1973)
10. Mandelker, Netsch, and Salsich (1983), pp 252-258.
11. *City of Montgomery v. Crossroads Land Company,* 355 So. 2d. 363 (1978).
12. *Rosen v. Downers Grove,* 19 Ill. 2d. 448, 167 NE 2d. 230 (1960).
13. *Builders and Contractors of Pinellas County v. City of Duneden,* 329 So. 2d. 314 (1976). cert denied 444 U.S. 867 (1978), *City of Arvada v. City and County of Denver,* 661 P. 2d. 611 (1983), and *Home Builders Association of Greater Salt Lake City v. Provo, Utah,* 28 Utah 2d. 402, 502 P. 2d. 451 (1972).
14. *Pioneer Trust and Savings Bank v. Village of Mount Prospect,* 176 N.E. 2d. 799 (1961).
15. *Ayers v. City Council of Los Angeles,* 34 Cal. 2d. 31, 207 P. Ed 1 (1949).
16. *Jordan v. Village of Menomonee Falls,* 137 N.W. 2d. 442 (1966).
17. *Home Builders and Contractors Association of Palm Beach v. the Board of County Commissioners of Palm Beach County,* 446 So.2d. 140 (1983).
18. *Lafferty v. Payson City,* 642 P. 2d. 376 (1982).
19. *Banberry Development Corp. v. South Jordan City,* 631 P.2d. 899 (1981).
20. *Builders and Contractors of Pinellas County v. City of Duneden,* 329 So.2d 314 (1976), cert denied 444 U.S. 867 (1979).
21. *Mitchell and Best Co. v. Washington Suburban Sanitary Commission,* (1984).
22. *City of Fayetteville v. IBI Inc,* 658 S.W.2d 505 (1983).
23. Juergensmeyer, Julian C., "Funding Infrastructure: Paying the Costs of Growth Through Impact Fees and Other Land Regulations Charges," in *The Changing Structure of Infrastruture Finance,* Ed. by James C. Nicholas, Lincoln Institute of Land Policy, Monograph #85-S, Cambridge, MA. (1985) pp. 37-38.

Book Review

The Unsheltered Woman

Eugenie Ladner Birch

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The Unsheltered Woman: Women and Housing in the 80's, edited by Eugenie Ladner Birch, New Brunswick, N.J.: Center for Urban Policy Research, (1985).

Gender related planning problems seldom receive the attention they deserve. Recent changes in demographic patterns have created a growing interest in the relationships of women to housing, planning and public policy. A new book entitled **The Unsheltered Woman** moves these relationships to the forefront of housing and planning policy. **The Unsheltered Woman** is a result of the Seminar on Women and Housing sponsored by the Ford Foundation and Hunter College between 1981 and 1983. This collection of essays serves as an insightful contribution to the literature on gender related housing issues.

Authored by professionals from a variety of backgrounds and specializations, the twenty essays in this book provide a comprehensive approach to understanding the unique housing circumstances that affect today's women. Contributors "include architectural historians Dolores Hayden and Gwendolyn Wright, housing analyst Michael A. Stegman, architects Judith Edelman, Michael Mostoller, and Theodore Liebman, developers Lynda Simmons, Clara Fox, and Carol Lamberg, environmental psychologist Susan Saegert, community organizer Jan Peterson, South Bronx Development Office Project Director Rebecca Lee, and planner Jacqueline Leavitt."

Part I focuses on identifying the unsheltered woman and her needs. Demographic patterns are analyzed, and housing preferences are elucidated in terms of age, marital status, income group, and household composition. More than forty percent of the nation's ill-housed population are female heads of households. As more women enter the labor force, and as the number of female heads of households increase, housing policies must be re-examined to address the unique requirements of these women. Single parents and elderly single women constitute the two population groups most severely affected by poor quality housing. Part one discusses the experiences of Denver and New York City in reviewing their housing programs in light of women's needs. The concerns of single working women and working wives are also identified as groups who have special housing interests.

Part II of **The Unsheltered Woman** offers housing alternatives that may be more responsive to the general housing requirements of female heads of households whether they are single, single parents, working wives, or elderly. A "checklist" identifies the special requirements of these groups of unsheltered women: safe, well serviced neighborhoods, proximity to safe, reasonably priced transportation, accessibility to shopping and other services, flexibility in design of living spaces and efficiency in terms of housekeeping. Women with children have

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other requirements such as the presence of child-oriented services in neighborhoods, housing located near to work places, dwellings with work spaces designed for more than one worker, and private space for parent(s). Single women similarly have special interests: housing that is safe and secure, and architectural designs which accommodate sharing of living space. Essays discuss the potential of various forms of housing to meet these needs of unsheltered women. Suggested solutions include cooperative and intergenerational housing, shared living arrangements, boarding houses, rooming houses, mini-dwelling units, and the renovation and rehabilitation of existing buildings to promote flexibility in use and community support. Shared housing is advocated as a positive way of providing affordable units in urban areas. Mini-dwelling units, which do not currently conform to the housing code, combine the advantages of both multifamily and private dwelling through private living/kitchen space, and shared bath and communal areas. Practicality in terms of affordability, physical design and service provision are the focus of this section.

These themes of affordability and practicality are also applied to the design of implementation strategies addressed in Part III. Planning for a more equitable provision of adequate housing will be accomplished through the skillful administration and design of programs targeted towards needy population groups. Innovative ideas for implementing housing strategies in light of economic and political realities are discussed, with specific examples from New York City. A two-part appendix summarizes gender-related housing problems in America, and in New York City.

Although a disproportionate share of cases in The Unsheltered Woman are concerned with the specific housing problems of New York City, the basic innovative concepts and techniques described are universally useful. They serve as a means of broadening the scope of traditional housing policy, design and planning to include the special day-to-day needs of women who are often neglected by planners and architects. Gender conscious policy planning has the potential to help women improve their quality of life. This practical and contemporary collection of essays responds to changing demographic currents, and contributes to action-oriented research in planning for those who face severe obstacles in obtaining adequate, appropriate housing and urban services. □

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Commentary

Reflections on the Low Income Housing Issue

Michael A. Stegman

Michael A. Stegman is Professor and Chairman of the Department of City and Regional Planning. He is currently working on low income housing policy issues with the Mayor's Commission on the Year 2000 in New York City and is assisting the City of Raleigh, North Carolina in designing system development fees to help finance the capital costs of growth.

Between fiscal years 1979 and 1986, the low income housing sector has borne the brunt of the "Reagan revolution." During this time, annual funding for low income housing programs declined by more than two-thirds in current dollars (from $32 billion a year to $9.9 billion), and by three-quarters in inflation-adjusted dollars.

Housing advocates across the country have been numbed by these draconian cuts in low income housing programs, by repeated Administration claims that housing resources are best produced and allocated through the market mechanisms, and by government plans to privatize the FHA and get out of the housing business. Not surprisingly, much of the energies of these housing advocates have been devoted to preserving whatever programs they can rather than systematically rethinking what an appropriate federal housing role should be in the contemporary policy environment. What creative thinking is taking place among low-income housing advocates tends to be premised on the need for an even greater federal commitment to low income housing than existed either before the Reagan victory or during the 1960s, the height of liberal housing policy-making and program implementation. Rather than addressing the more practical and difficult issues of how increasingly scarce federal housing resources should be strategically allocated among a number of competing uses, housing advocates behave as if a Democratic administration in 1988 would eagerly embrace their ambitious housing agenda. Unfortunately, this is just wishful thinking.

While a successor administration (Democratic or Republican) could adopt a more activist housing posture than the Reagan "free marketeers," such a policy perspective would not necessarily lead to a return to the halcyon days of yore. As a matter of fact, had President Carter been re-elected in 1980, the federal retrenchment in low income housing (for which most people blame Reagan) would have been initiated by a Democrat. Under intense pressures from double digit inflation, interest rates, and mounting deficits, the Carter budget for fiscal 1981 would have called for a substantial reduction in new commitments to low income housing production programs.

The fact is that neither Reagan's pure market approach nor the housing advocates non-market solutions to low income housing problems are useful policy paradigms. The former case simply redefines the problem in terms of inadequate incomes, as if the most inadequately housed populations are benefitting significantly from our national economic recovery, and as if there were no supply shortages. On the other hand, by calling for even more and bigger production programs, the non-market strategy seriously underestimates the recent change in the national mood and the depth of the new national commitment to control the growth of the federal government and reduce the budget deficit.

There is, of course, a major case to be made for a continued federal low income housing presence in a form and organization quite different from that which exists today. I would argue, for example, that scarce federal housing resources should, first and foremost, be devoted to the preservation and maintenance of the stock of nearly four million assisted housing units that already exist in cities, towns and rural communities across the country. A preservation strategy makes eminent sense during a period in which there will be substantially fewer new units produced to house needy families. Saving an existing unit from drop-

ping out of the inventory, or bringing one back into active use, has the same effect as building a new unit. More importantly, federally-assisted housing units that are poorly maintained are a blight on the community and give all low income housing programs a bad reputation. In an era when local officials are going to be called upon to support their own low income housing initiatives with general revenues — perhaps for the first time ever — it is especially important that dilapidated federally assisted housing projects not be the cause of neighborhood deterioration.

Second, because affordability problems are bound to worsen before they get better, a reoriented federal low income housing program should contain an enlarged income support component which coordinates HUD's rental assistance programs with the income maintenance programs of the Department of Health and Human Services (HHS). Today, the shelter allowance component of HHS's public assistance budget is more than $5 billion a year, or nearly half as large as HUD's total annual outlays for housing assistance. Despite these billions, up to half of all families receiving welfare payments are forced to live in substandard housing. Workable ways of coordinating housing and welfare programs were proposed during the early Carter years but were defeated by influential housing interests who feared that welfare reform would result in a "cashing out" of housing production programs. Ironically, the program the industry saved in 1977-78 has since been eliminated by the Congress as being too costly, and rental assistance payments programs have not benefitted from the cuts. Without the future of large-scale production programs hanging in the balance any more, the political difficulties inherent in reforming rental assistance and welfare programs should be much less serious than they were five years ago.

Third, there is a continuing need for low income housing production programs. Even the Reagan administration acknowledges that somewhere in the neighborhood of five million families across the country are inadequately housed while millions more are paying unaffordably high rents. Among the ill-housed, there are disproportionate numbers of blacks, Hispanics, elderly and female-headed households. In such widely different areas as New York City and Raleigh, North Carolina, for example, twice as many families are certified as being eligible for low rent public housing as there are apartments to house them. And in both cities, too, the number of homeless grows larger by the month. This is particularly surprising in a city like Raleigh, whose high-tech, robust economy has been fueling a major population and housing boom.

The need for continued production programs does not, however, mean that the federal government must continue to process and underwrite housing projects from Washington. Indeed, even if the Congress were to reverse course and fully fund production programs at their 1979 levels, HUD would be totally incapable of handling the increased appropriations. The agency's housing delivery capacities have deteriorated in direct proportion to the layoffs (Reductions-to-Force), retirements and reorganizations that have occurred since 1981.

New budget and contract authority, however, can be folded into a housing block grant and allocated to states and localities on a formula or another basis. In 1980, Congress directed HUD to evaluate the feasibility of consolidating its housing assistance programs into a block grant. While difficult technical issues proved resolvable, certain political and institutional problems posed more serious problems to the creation of a housing block grant. The political problem had to do with big city housing interests which believed they would not fare as well under housing programs administered by the state as they were faring under HUD's existing allocation system. The second issue concerned the institutional capabilities of state and local government to package housing projects. Rural interests, especially, were concerned that the states would not be able to deliver housing to very small settlements where substandard housing is more prevalant.

While similar questions remain today, states and localities are far more experienced in the housing development process than they were five years ago. The extremely high cost of low income housing assistance, however, demands that the federal government continue to supplement whatever resources states and localities are able to devote to the problem. Where state and local capacity still does not exist, the federal government can maintain a skeletal processing unit to deliver housing to localities which could not otherwise be served.

In short, the challenge facing housing advocates is helping to shape a reorganized and reoriented national housing program whose reduced levels of funding must be used to help preserve the existing subsidized housing stock, assist low income families who cannot afford the cost of decent housing and to stimulate and support state and local efforts to expand the supply of low income housing. □

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